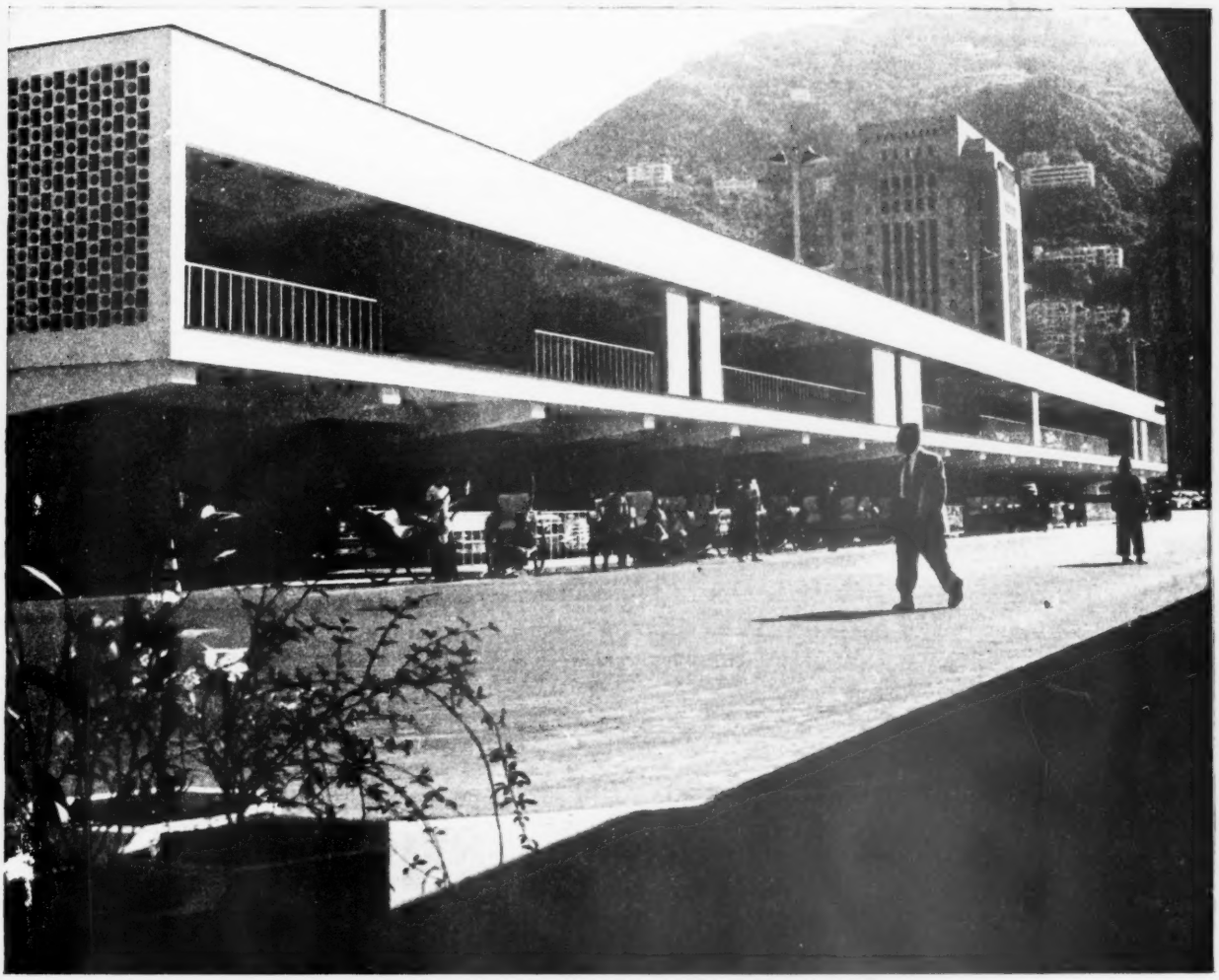
FINE ARTS S

DETROIT PUBLIC LIBRARY NOV 28 195

THIRD SERIES VOL 66 NUMBER 1 NOVEMBER 1958

66 PORTLAND PLACE LONDON W1 · THREE SHILLINGS AND SIXPENCE



A three-tiered car park in Hong Kong for 405 *cars, by the Architectural Office, Public Works Department, Hong Kong*

32
contracts
from the
English Electric
CO. LTD
endorse the supremacy of

COLT

VENTILATION

Time and again, industrialists large and small place repeat orders with Colt. And for three good reasons. Colt ventilation systems depend in the main on internal convection currents—*not* external forces—and are therefore little affected by the vagaries of the wind. Colt offer an unparalleled range of ventilators. And most important, every Colt recommendation is based on a thorough analysis of the building, plant and process either from a site survey or drawings. Such thoroughness influences firms such as the English Electric Co. Ltd. It will impress you, too.

Send for free manual to Dept. AF 29/11

Among the 12,000 major Industrial Organisations using Colt equipment are:

15 contracts: *Cow & Gate Ltd.*
20 contracts: *Courtaulds Ltd.*
37 contracts: *Vickers-Armstrongs (Aircraft) Ltd.*
6 contracts: *Smith-Clayton Forge Ltd.*
29 contracts: *National Coal Board*
22 contracts: *Lever Bros. Port Sunlight Ltd.*

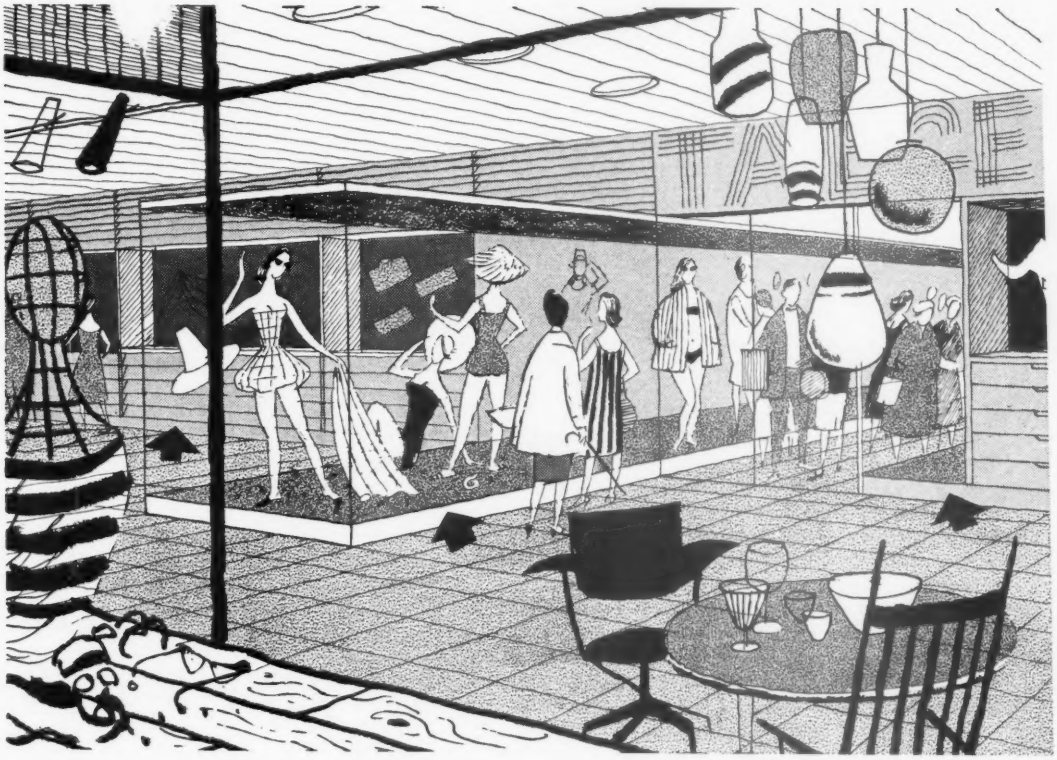


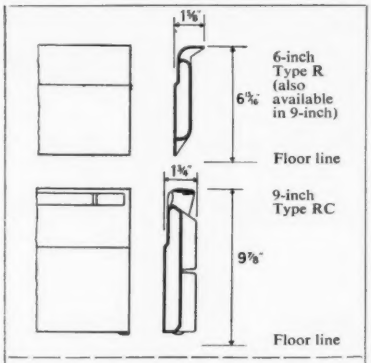
COLT CO 2046 VENTILATORS AT THE ENGLISH ELECTRIC CO. LTD., RUGBY

COLT VENTILATION LIMITED · SURBITON · SURREY · TELEPHONE: ELMBRIDGE 0161 (10 LINES)



Whe very inch of wall is wanted





Manual (No.423) on Crane Skirting Heating may be had on application to

CRANE LTD., 15-16 RED LION COURT
FLEET STREET, LONDON, EC4

London Showrooms:

118 Wigmore Street, London, W.1 and
Great West Road, Brentford, Middlesex

Branches:

BIRMINGHAM · BRENTFORD · BRISTOL
GLASGOW · LONDON · MANCHESTER

Works: IPSWICH

Z7

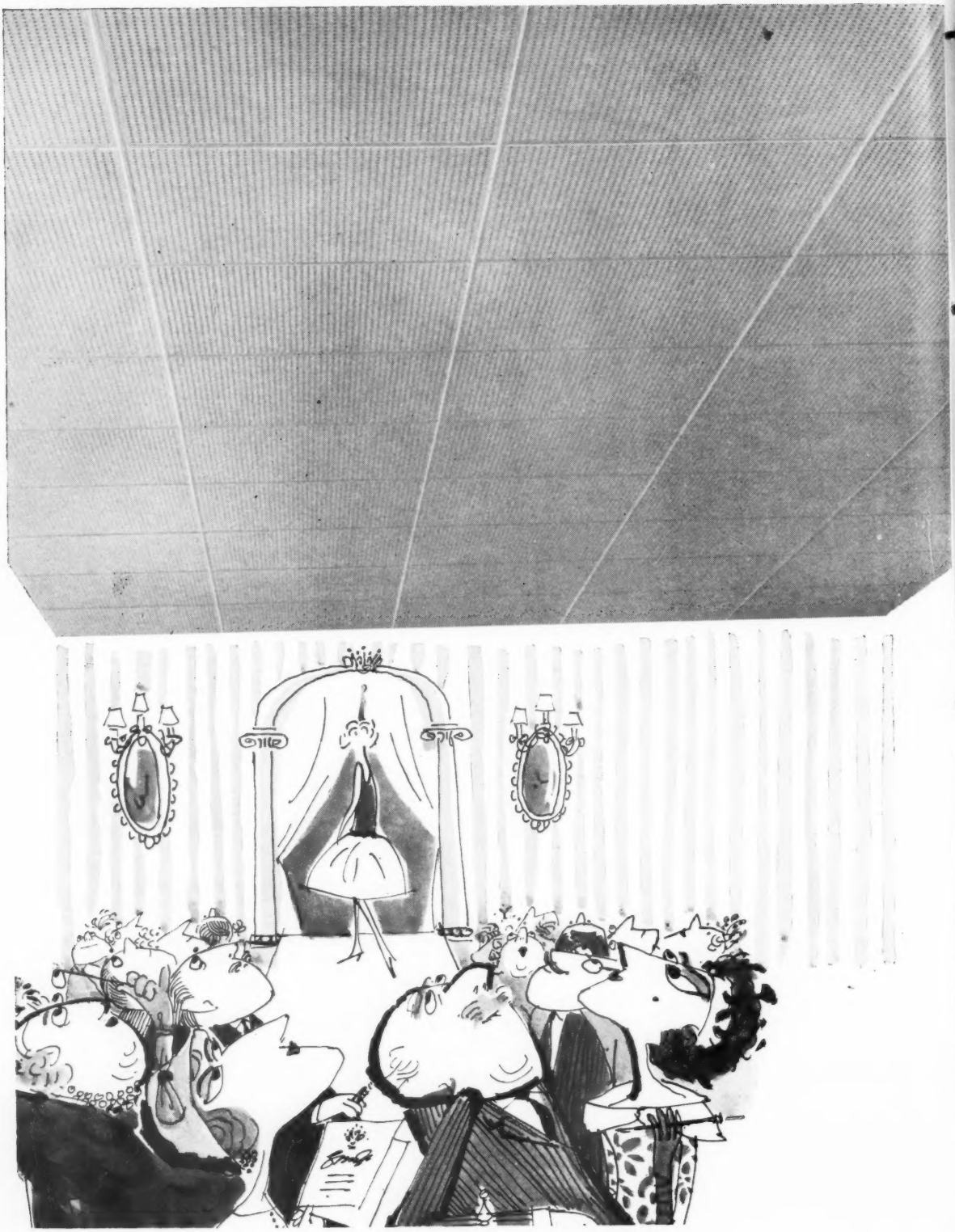
WHEREVER maximum space is a functional necessity—and there are many instances, such as shops, libraries and exhibition rooms—the problem arises of how to make provision for a heating system that gives the proper requirements of evenly distributed warmth, functions economically, and neither takes up useful wall space nor offends aesthetically by spoiling a clean-looking line.

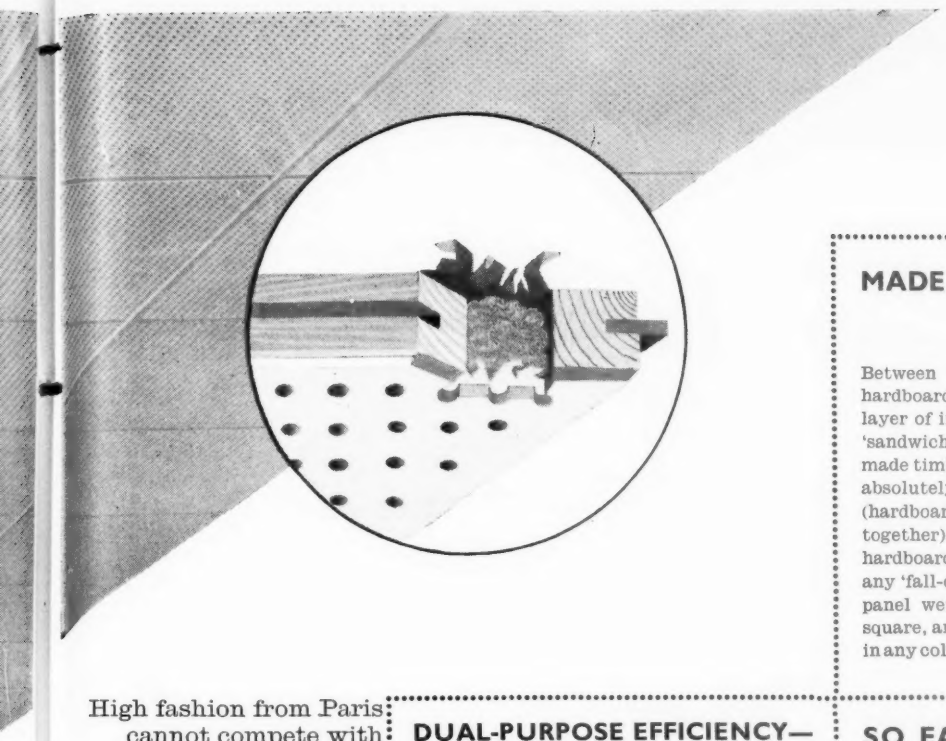
There is one system which architects are now coming to look upon as the best answer to this problem. It has been evolved by Crane Ltd. (already well known for other types of heating equipment) and employs heating panels in place of the usual skirting boards. It is clear that this system gives the designers considerable flexibilty of arrangement. The heating panels are quite unobtrusive and, being capable of encircling the entire room if necessary, eliminate 'hot spots' and distribute the warmth evenly where it is wanted. In the illustration the position of Skirting Heating panels is indicated by arrows. It will be readily appreciated how well this system answers the condensation problem here.

There are two types of panel. Type R—purely radiant—in 9-inch panels to match Type RC, and in 6-inch panels for use where less heat is required: and Type RC (radiant-convector) 9-inches high. The panels used in the example illustrated are 6-inch Type R. All panels are in 2-ft and 1-ft lengths and are made of cast iron, which gives them considerable resistance to accidental damage. The operations of calculating heat requirements and designing the pipework are in principle no different from those for conventional radiator heating systems.

Wherever the architect needs greater freedom of expression than conventional heating systems allow him, and at the same time has to pay due consideration to costs, the answer is, undoubtedly,

CRANE skirting heating





MADE LIKE A SANDWICH

Between the facing sheet of perforated hardboard and the kraft backing, there's a layer of incombustible mineral wool. This 'sandwich' is set in a perfectly square, jig-made timber frame which keeps it rigid and absolutely level with the other panels (hardboard splines are supplied to slot them together). A thin fibrous skin between the hardboard and the mineral wool prevents any 'fall-out' through the holes. The entire panel weighs only 6¼ lb., measures 2 ft. square, and is 1 in. thick. It can be supplied in any colour from the I.C.I. "Dulite" range.

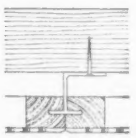
High fashion from Paris cannot compete with the latest creation from the house of Bowater—the Bowater T/A (Thermal/Acoustic) Panel. But smart appearance is only one of the attractions of this dual-purpose panel, which also has a very high thermal/acoustic efficiency and a remarkably low cost. It's well worth looking into for <u>your</u> next job—whatever it is. Here are some technical facts to start you thinking...

DUAL-PURPOSE EFFICIENCY—the Vital Statistics:

Sound Frequency (c.p.s.)	250	320	400	500	640	800	1000	1250
Sound Absorption Coefficient	·64	·59	·71	·77	·80	·87	·86	·87

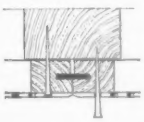
These figures clearly show that, in its *Acoustic* capacity, the new Bowater panel is way ahead of competition. Its performance is particularly good in the lower frequencies where noise in industry and in ordinary daily life is most common—and most dangerous. In *Thermal* insulation, too, the panel sets an exceptionally high standard—the thermal conductance (C value) is as low as 0·22. A dual-purpose panel indeed!

SO EASY TO FIX



1 By using Bowaters Concealed Securing Clips (screwed to the existing structure) which hold the panels secure and leave an air-gap above to add to their already outstanding thermal efficiency. From 32/6d. per sq. yd. FIXED.

2 For suspended ceilings, by using a specially designed Bowater Metal Fixing System. From 40/9d. per sq. yd. FIXED.



3 By using 2" galvanized lost-head nails driven through the appropriate outer perforations. From only 29/- per sq. yd.

Drop us a line for further information and the name of your nearest distributor.

YES—only 29/-!



Bowater T/A Panels

BUILDING BOARDS DIVISION, BOWATERS SALES COMPANY LIMITED,
BOWATER HOUSE, KNIGHTSBRIDGE, LONDON S.W.1. Tel: KNightsbridge 7070

CRCTA 4

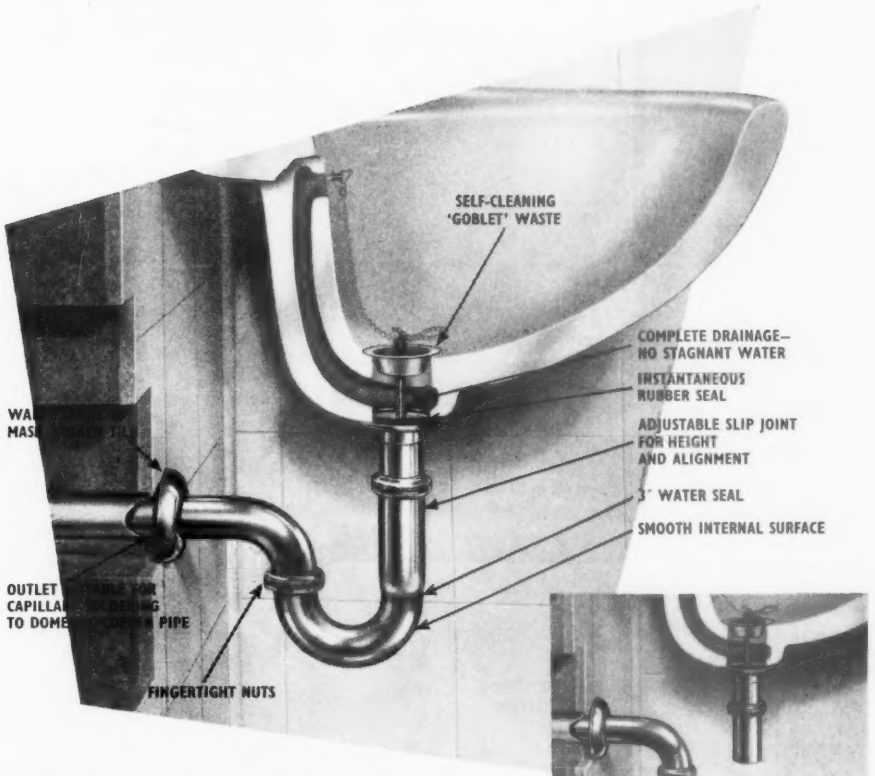

Clearing the way for Daylight
NEWCASTLE-UPON-TYNE
BELFAST
HUDDERSFIELD
MANCHESTER
DUBLIN
LIVERPOOL
NOTTINGHAM
LEICESTER
BIRMINGHAM
BRISTOL
LONDON
HEYWOODS
OF HUDDERSFIELD
Throughout the country many roofs in an advanced state of disrepair are being reglazed with HEYWOOD'S PATENT GLAZING. This replacement **does NOT involve the slightest hold up in production** but DOES involve many more maximum-light years, with increased output and considerably improved working conditions, decreased lighting costs and danger of damage to machinery and products, NO maintenance.
Quality of Glazing? Over 70 years stands surety for that!
Inspection and advice by experienced roofing engineers at the disposal of clients entirely without charge.
BAYHALL WORKS, HUDDERSFIELD. Phone Hudd. 6594 (5 lines)



Introducing

The 'BARKING' TRAPPED WASTE

Removed, cleaned and replaced in a matter of moments!



Ends all trouble and inconvenience from stopped-up U-bend pipes. By simply loosening two hand nuts even the housewife can remove, clean and replace the unit, perfectly watertight, in a matter of moments. Requires no special tools for fitting. Well designed and superbly finished in easily cleaned chromium plating or self colour brass. Packed in individual cartons for easy storage.

U-bend instantly removed for easy cleaning

BB REGD. *Quality Fittings*

Prices and further particulars on request:

BARKING BRASSWARE CO. LIMITED

RIVER ROAD · BARKING · ESSEX



PLANTATION HOUSE
MINCING LANE · CHEAPSIDE
Architects:
Albert W. Moore & Son



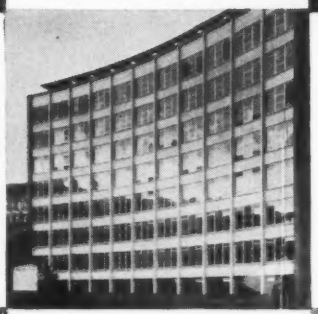
ROMAN HOUSE · LONDON WALL
Architect:
R. N. Wakelin
of Campbell-Jones & Sons



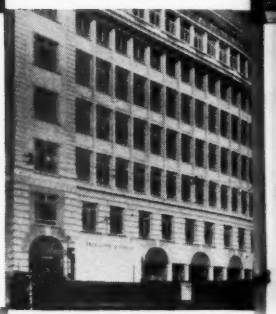
MERCERS' HALL · CHEAPSIDE
Architects:
Gunton & Gunton



HOLBORN VIADUCT HOUSE
HOLBORN CIRCUS
Architects:
T. P. Bennett & Son



1 NOBLE STREET
GRESHAM STREET
Architects:
Ellis, Clarke & Gallannaugh



ROYAL LONDON HOUSE
(EXTENSION) FINSBURY SQUARE
Architect:
H. Bramhill



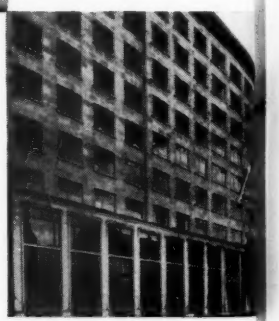
WATLING HOUSE
CANNON STREET
Architects:
Easton & Robertson



34-35 KING STREET · EC
Architects:
Alan W. Pipe & Sons



WALBROOK HOUSE
CANNON STREET · WALBROOK
Architect:
Henry Tanner



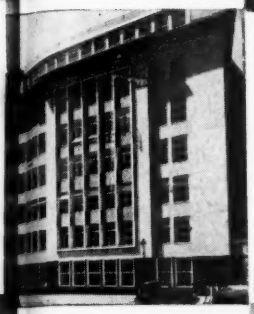
12-20 CAMOMILE STREET
Architects:
Fitzroy Robinson
& Hubert H. Bull

McCANN-ERICKSON HOUSE
FETTER LANE
Architects:
Hannen & Markham



BUCKLERSBURY HOUSE
Architects:
Campbell-Jones & Sons



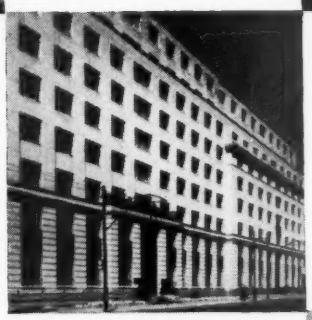


ST. BRIDGET'S HOUSE
BRIDEWELL PLACE
Architects:
Trehearne &
Norman Preston & Partners

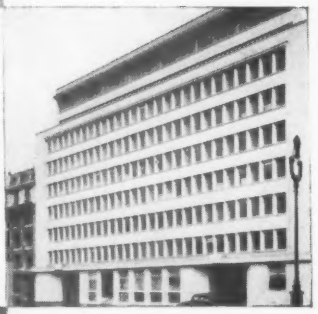


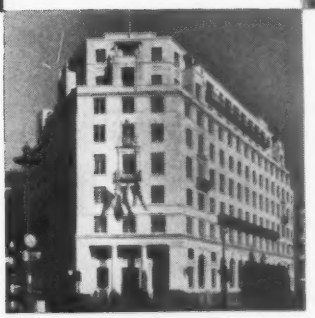
SADDLERS' HALL · GUTTER LANE
Architect:
L. Sylvester Sullivan

3-10 FINSBURY SQUARE
Architects:
Lewis Solomon Son & Joseph



THE AMALGAMATED PRESS
FARRINGDON STREET
Architects:
Ellis, Clarke & Gallannaugh





BANK OF LONDON
& SOUTH AMERICA
QUEEN VICTORIA STREET
Architect:
Victor Heal

The city re-builds with...

CRITTALL WINDOWS

THE CRITTALL MANUFACTURING CO. LTD · BRAINTREE · ESSEX · BRANCHES & DEPOTS THROUGHOUT THE COUNTRY

Check these against your next specification



'KUDAMPRO' dampcourse strip

Copper strip for horizontal damp-proof courses. Will not tear, puncture or exude from the joints. Soft-temper coils of standard length, width up to 36″.

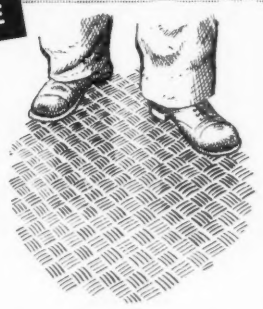
'TERRABOND'

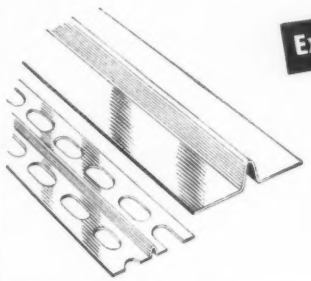
Serrated brass or aluminium alloy strip for terrazzo flooring. Reduces laying costs by allowing an early start to filling-in. Two sizes—$\frac{3}{4}$″ x $\frac{1}{8}$″ and $\frac{5}{8}$″ x $\frac{1}{4}$″, special sizes to order.



'KYNAL' TREADPLATE

Aluminium alloy treadplate half the weight of equally rigid steel plate. 1-4 ft. widths, lengths up to 12 ft., gauges from $\frac{1}{8}$″ - $\frac{1}{4}$″. Diamond pattern chequer plate also available.





Expansion joint strip

Copper strip for expansion joints, two patterns — BS 1878 and to I.C.I. design with punched holes to keep strip firm. Standard 10 - 12 ft. lengths x 5″ wide.

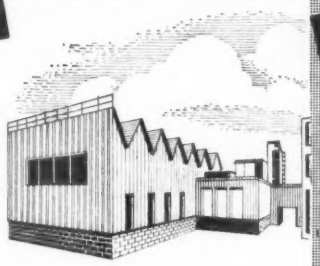


Roofing strip

Copper or aluminium alloys for roofing strip, weatherings, gutterings & flashings.

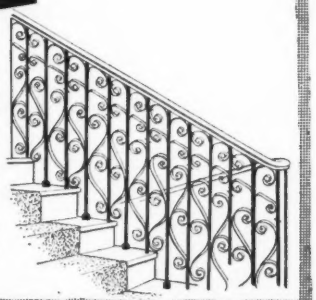
'KYNAL' profiled sheets

Aluminium alloy profiled sheet for lightweight, durable roof and wall cladding. Three types—corrugated (curved sheets available), troughed and 'Kynalok' Secretfix (with provision for insulation lining).



Extrusions

Copper alloy for balustrades, doors, window frames, stair nosings, shop fittings, and decorative trim. 'Kynal' aluminium alloy for structural members, trusses, purlins, glazing bars, handrails, etc.

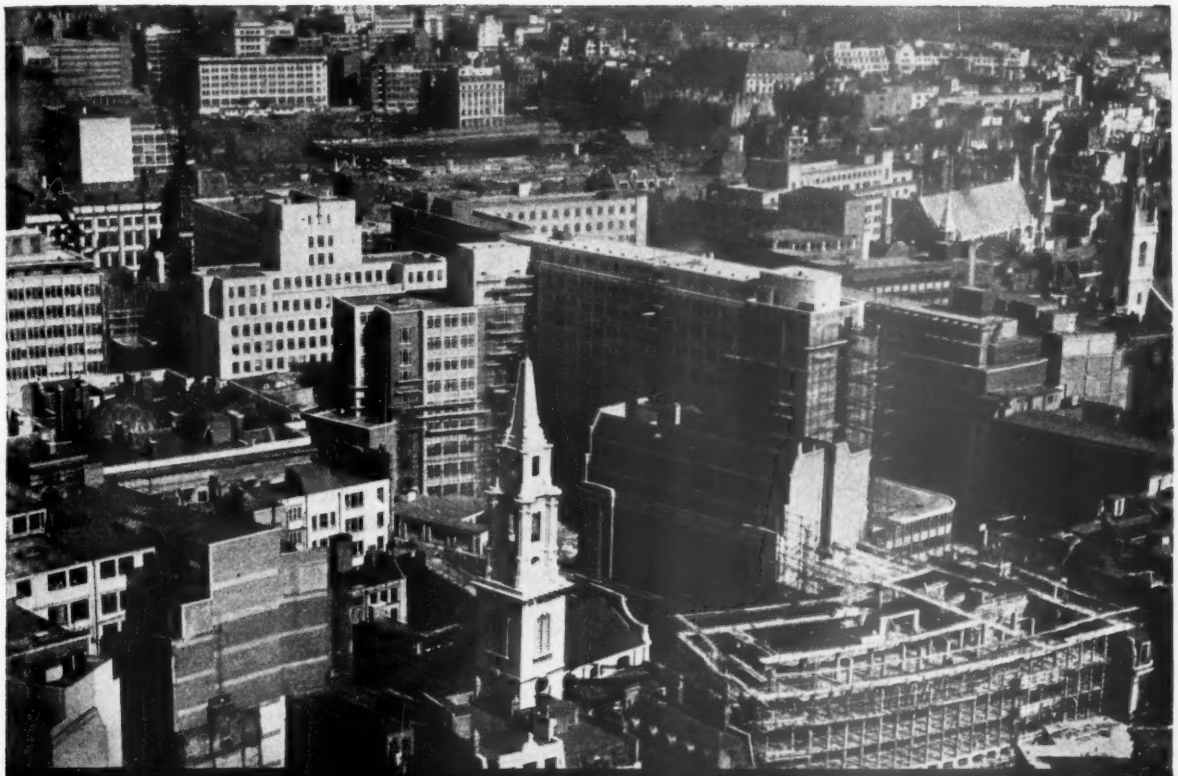


Modern materials in modern buildings

IMPERIAL CHEMICAL INDUSTRIES LIMITED, LONDON, S.W.I

ICI METALS DIVISION

M.21



The face of London changes...

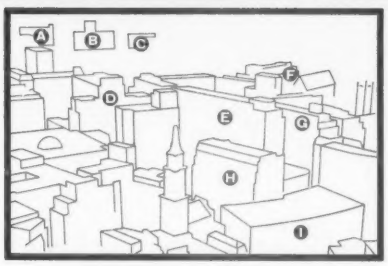
but the name of *FOSALSIL* recurs...

For 25 years now, since we first introduced Fosalsil flue bricks, it has become practically second nature for British architects to specify them for lining boiler flues.

But although accustomed to the highest confidence being placed in our product, it was none the less gratifying to note that in every one of the buildings numbered above, Fosalsil flue bricks were employed throughout.

FOSALSIL

Made only by MOLER PRODUCTS LIMITED
Hythe Works, Colchester. *Telephone: 3191 (3 lines).*



	BUILDING	ARCHITECT	CONTRACTOR
A	57/67 Chiswell St.	Sanders & Montague, 24 Harley Street, W.1.	G. E. Wallis & Sons Ltd.
B	B.P. House	Messrs. Joseph, 10 Lowndes Sq., S.W.1.	Myton Limited.
C	Chile House	Joseph Mendelson & Partners, 71 Wimpole St., W.1.	Gee, Walker & Slater.
D	Garrard House	Major A. S. Ash, 66 Gt. Cumberland Place, W.1.	Sir Robert McAlpine.
E	2/12 Gresham St.	Easton & Robertson, 53 Bedford Sq., W.C.1.	John Laing & Son Ltd.
F	Guildhall Office Block	Sir Giles Gilbert Scott, 9 Grays Inn Sq., W.C.1.	Trollope & Colls Ltd.
G	Clements House	Trehearne & Norman Preston & Partners, 83 Kingsway, W.C.2.	Wates Ltd.
H	Saddlers Hall	L. Sylvester Sullivan, 14 Grays Inn Sq., W.C.1.	Holland & Hannan and Cubitts.
I	Cheapside House	Theo. H. Birks, 38 Portland Place, W.1.	Bernard Sunley & Sons.

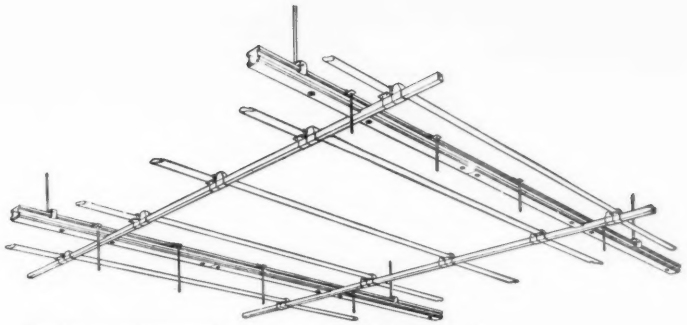
atlas sylvalume

—a new wall-to-wall lighting system with unlimited design possibilities

Atlas Sylvalume is a new system of ceiling lighting, using a variety of inter-changeable plastic panels and acoustic baffles on a 3 ft. modular grid. With these elements the designer is able to explore pattern, colour, texture, mood and style with complete freedom. Each lighted ceiling can be a unique creation, completely in harmony with the architectural design of the premises in which it is located: yet each effect is obtained by using a minimum number of standard components.



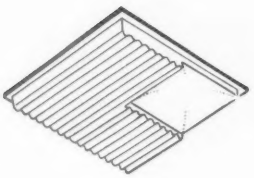
Based on the Sylvalume system developed by Sylvania Electric Products, Inc., in the U.S.A.



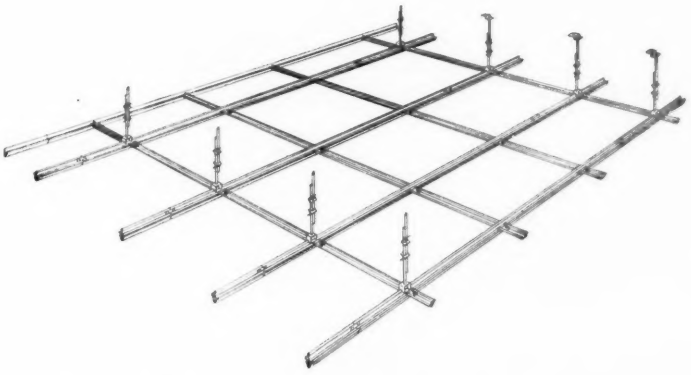
Trunking and unistrut assembly to support tubes and Sylvalume grid



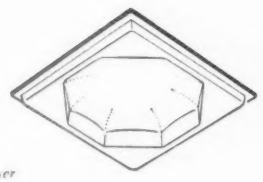
Plain dish diffuser



'L' Shape diffuser



Appearance of Sylvalume grid from above



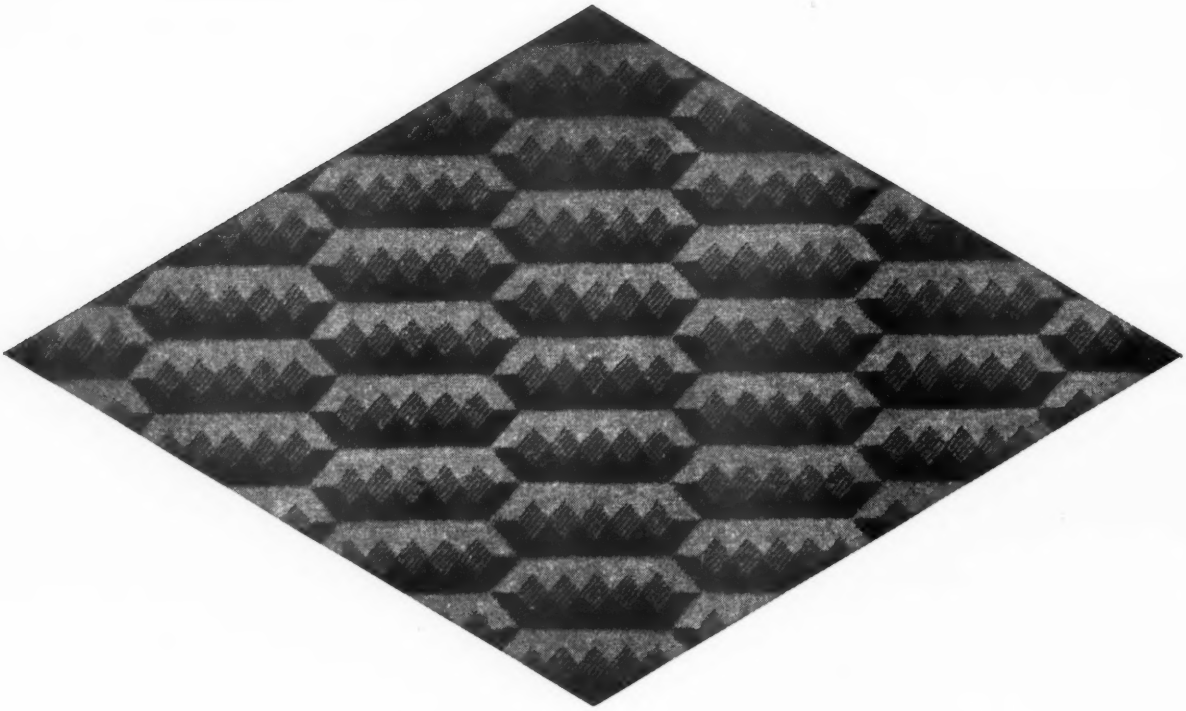
Octagonal diffuser

atlas sylvalume

—quick, easy and economical to install

In the Atlas Sylvalume system the lighting equipment comprises a modified form of Atlas trunking, accommodating the control gear for the required number of Atlas 8 ft. 125 watt fluorescent tubes. The tubes are supported on cross-beams, and from the trunking is suspended an aluminium grid on a 3 ft. module. Within the grid square vinyl plastic diffusers of differing textures, colours and form can be arranged in almost limitless variety. Acoustic baffles available in different colours and finishes can be clipped to the grid. These provide effective acoustic treatment, and assist in accenting or modifying the appearance of the ceiling. The use of 8 ft. tubes and fittings ensures the utmost economy in installation and use.

ATLAS LIGHTING LIMITED (A SUBSIDIARY COMPANY OF THORN ELECTRICAL INDUSTRIES LTD.) 233 SHAFTESBURY AVENUE LONDON WC2



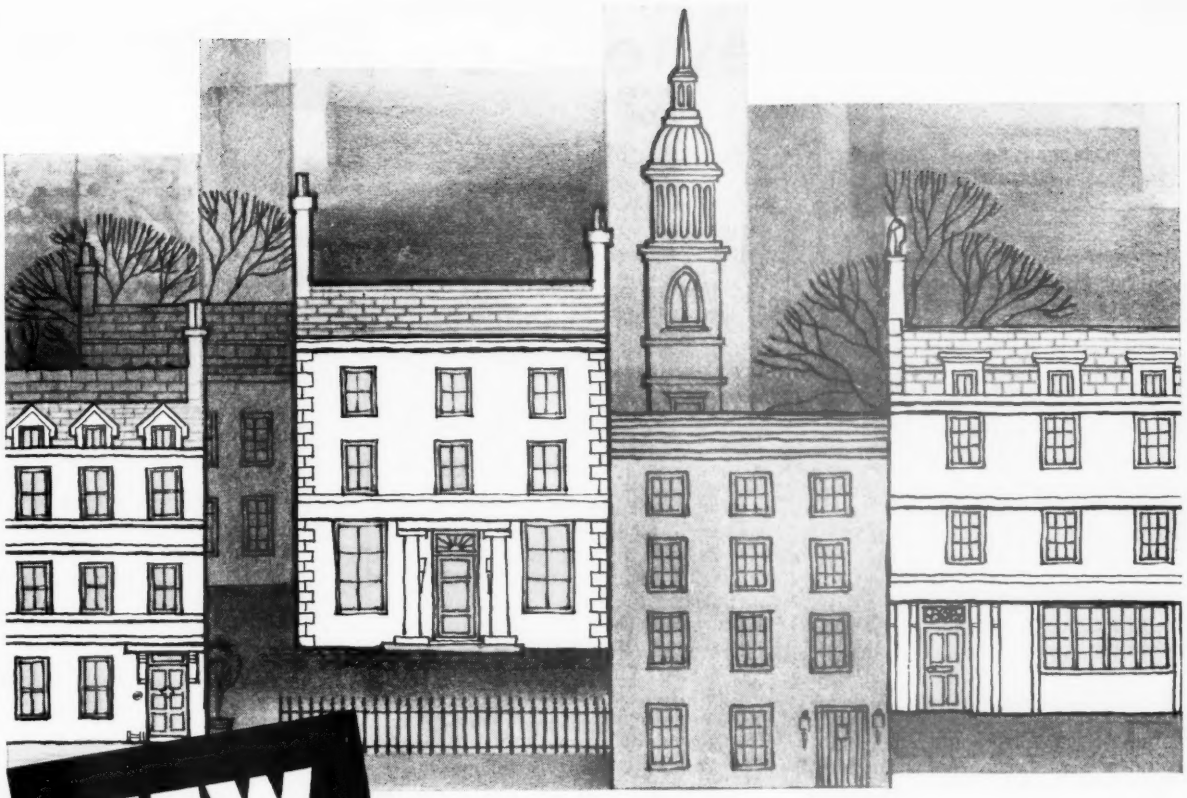
* 1958 Design Centre Award goes to a

TOMKINSONS

architect designed carpet

For the second year running, a Design Centre award goes to a Tomkinsons Carpet. The winning pattern is "Linked Design 13/ZA2" by Ward & Austin—"A first class contract carpet well suited to public places" said the Judges. "Its distinguished architectural design, comprising interesting counterchanges of simple geometrical shapes, is never overpowering from whatever angle it is seen". This is one of a range of four related patterns by the same designer and is available in any two colour combinations for a minimum quantity of 100 yards.

TOMKINSONS · LIMITED · P.O. BOX 11 · KIDDERMINSTER · WORCS



NEW

for a long time!

Cleopatra

reinforced wall coating

Here is a new and outstanding flat finish for all kinds of exterior masonry. Extra protection, extra long life and extra good looks are built into its formula. Based on a highly durable synthetic resin, Cleopatra Reinforced Wall Coating is superbly dependable, applies easily, and has excellent adhesion.

It dries quickly and rock-hard — to give strong, *long* protection under even the severest conditions of weather and atmosphere. It *keeps* its good looks — thanks to first-class colour retention. On all counts, Cleopatra Wall Coating is a paint worth knowing — and using! Write or phone today for our descriptive leaflet.

INDESTRUCTIBLE PAINT COMPANY LTD, 6 CHESTERFIELD GARDENS, CURZON STREET, LONDON, W.1. Tel: GROSVENOR 8971/5

monthly review by WILLIAMS & WILLIAMS

'WALLSPAN' FOR EASTBOURNE LUXURY FLATS

1 The new 7-story Park Gates flats overlooking the sea at Eastbourne is, as far as we can trace, the first block of luxury flats in this country to have glass curtain walling. Wallspan was specified by the architect who was largely influenced by the detailing and way in which 'Wallspan' is designed for precision construction. This choice was amply justified in a trouble free installation.

The infilling panels are sprayed with a special paint which gives a multi-colour effect from one spraying.

Williams & Williams Standard Metal Windows to BS.990 have been used extensively both in the 'Wallspan' grid and also in the brick facades.

Park Gates present a very elegant face on every side—no pipes are visible on the exterior of the building. Single stack plumbing is used and this is thought to be the first time that it has occurred in a seven-story building outside the L.C.C. area. The interior is equally carefully detailed—for instance television and telephone wiring is laid on to every flat and apparatus merely needs to be plugged in.

A novel feature is an annexe of ten bedrooms with private bathrooms which can be rented by tenants for their visitors' occupation.

BRITAIN'S TALLEST OFFICE BLOCK HAS ALUMINIUM WINDOWS BY WILLIAMS & WILLIAMS

2 Eastbourne Terrace, Paddington, has already been in the news for the fantastic speed at which construction has gone on. The 18-story tower block was 'topped out' almost exactly a year after work started on the site. Williams & Williams contribution to this notable achievement was the supply of 2698 double hung windows in aluminium. In the tower block from the 8th story upwards, the windows are double glazed for additional thermal insulation.

The steel windows used in the lift halls of the tower block etc. were also supplied by Williams & Williams while the links between the tower block and the wings are in 'Wallspan' infilled with clear glass.

The balustrading which runs round the cornices of the wings is also a product of the Williams & Williams group. The upstands are made of steel and the rails are aluminium.

'ALUMINEX' GLAZING GIVES IDEAL WORKING CONDITIONS AT NEW PERMUTIT FACTORY

3 The extensive use of 'Aluminex' Patent Glazing combined with the wide uncluttered floor space resulting from the use of portal frame construction gives exceptionally good working conditions on the floor of Permutit Company's new factory at Ealing. Great importance has been attached to this aspect of the new building and the whole project including the interior colour schemes was planned in detail by the architects and engineers. The factory floor area of approximately 36,000 sq. ft. is divided into three bays, two of which have electric travelling cranes running the full length. Canteen and toilet facilities including showers and lockers are grouped together as an extension of the adjoining office block where Williams & Williams provided the purpose made windows and lantern lights as well.

'WALLSPAN' CURTAIN WALLING AT LEEDS GRAMMAR SCHOOL

4 As can be seen from the photograph, interest is added to the long facade of the main classroom block by a 'picture window' treatment of the staircase wells using clear-glazed 'Wallspan'. The use of individual staircase access to the blocks of classrooms rather than corridors running through the building from end to end is an unusual feature. It comes about because the north/south facing block has to be built two classrooms 'thick'. The north facing rooms open on to terraces on the first floor and at the top of the building receive a measure of sun through roof glazing. 'Wallspan' is used also in the south-east elevation of the foyer linking the classroom and assembly hall blocks.

A WILLIAMS & WILLIAMS 'CO-OPERATIVE' CONTRACT

5 Everything in the new St. Helen's Co-operative Society store which Williams & Williams could supply—they supplied. 'Wallspan' Curtain Walling, purpose made aluminium windows, standard steel windows, 'Aluminex' Patent Glazing, 'Aluminex' Lantern Lights and pressed metal work. Quite an impressive list—and it had the added advantage that all these products could be integrated by the architect on one schedule so as to ensure a logical and easy-to-control sequence of delivery.

NEW STANDARD WINDOWS NEED NO PAINTING!

Steel windows to BS.990 are now available electro-galvanized, phosphated, primed *and painted*—AT NO EXTRA COST! Finish is I.C.I. Beige R215/166/2. *These windows are fully protected and need no painting unless to change their colour.*

WILLIAMS & WILLIAMS
RELIANCE WORKS · CHESTER

Member of the Metal Window Association

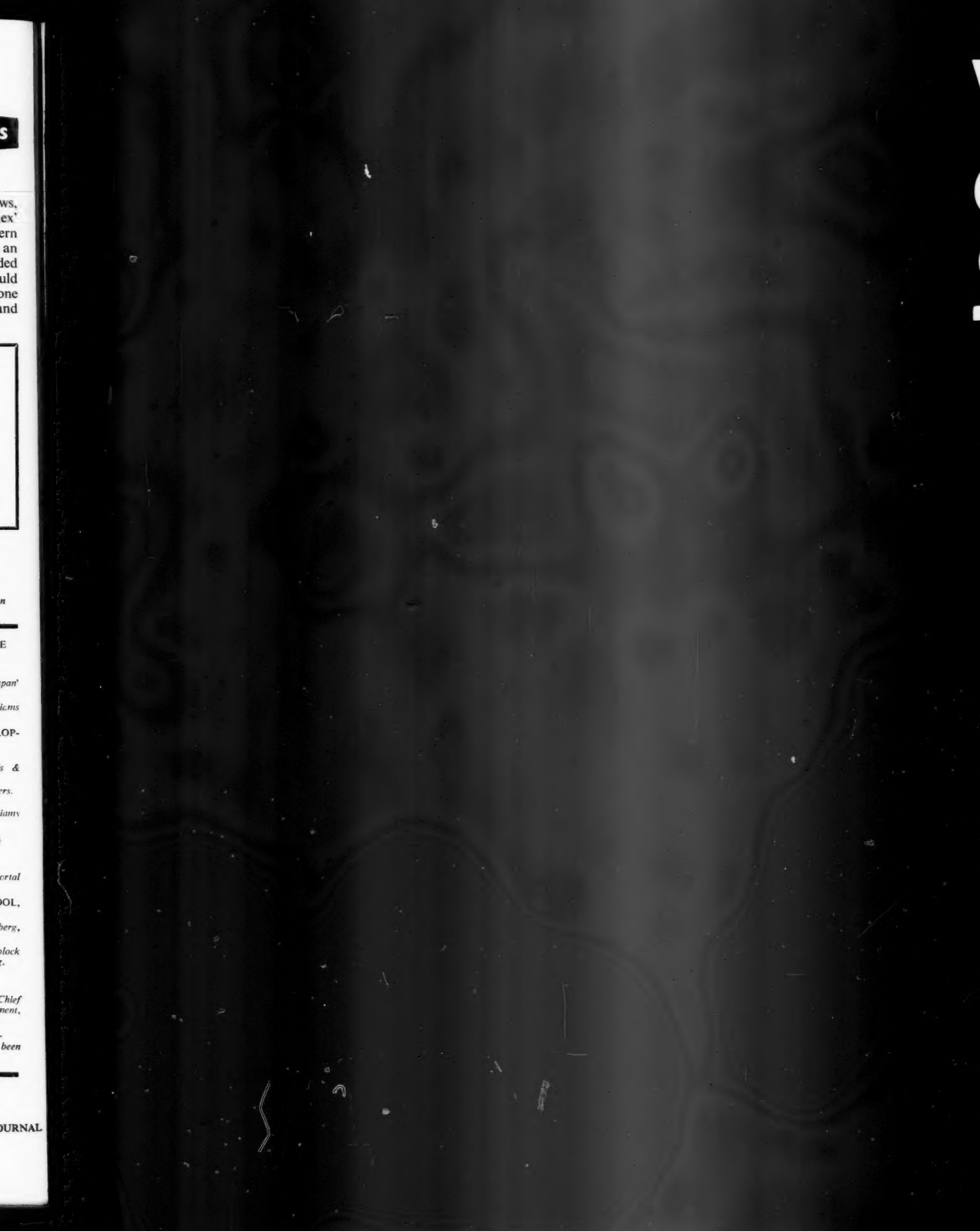
1 PARK GATES FLATS, EASTBOURNE
Architect: H. Hubbard Ford, F.R.I.B.A.
Architect-in-Charge: S. Hoyer, M.A.A.
A *General view showing the 'Wallspan' installation.*
B *Detail showing the Williams & Williams Standard Metal Windows.*

2 EASTBOURNE TERRACE DEVELOPMENT, LONDON
Architects: Cecil H. Elsom & Partners.
Consulting Engineers: Clarke, Nicholls & Marcell.
Quantity Surveyors: Cyril Sweett & Partners.
Contractors: Tersons Limited.
Some of the 2698 Williams & Williams aluminium double-hung windows.

3 THE PERMUTIT CO. LTD., EALING
Architects and Consulting Engineers: Husband & Co.
'Aluminex' Patent Glazing in one of the portal framed bays.

4 TEMPLE MOOR GRAMMAR SCHOOL, LEEDS
Architects: F. R. S. Yorke, E. Rosenberg, C. S. Mardall, F./F.R.I.B.A.
North-western facade of the classroom block note the detailing of the staircase cladding.

5 C.W.S. STORE, ST. HELEN'S, LANCASHIRE.
Architect: G. S. Hay, A.R.I.B.A., *Chief Architect, C.W.S. Architect's Department, Manchester.*
Architect in design: J. Douglas, A.R.I.B.A.
Six Williams & Williams products have been used in this building.



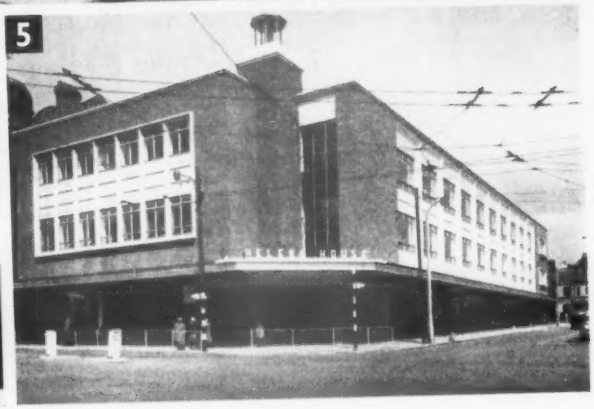

1A


3


1B

2


4


5

Trusconversations 4

SCENE: Architect's office
TIME: Any hour between 9.30 a.m. and 5 p.m.

"Seen these conversations Truscon are putting out?"

"Yes, don't see the point myself."

"Oh! I can see the point — they try and make one each time — I've been following it."

"Oh?"

"Yes, the first was about Granada TV Studio in Manchester — and how quickly they designed and built the framework — six weeks I think."

"I remember."

"In the next one — they've made rather a name for themselves in flats — they tried to emphasise that they still do heavy work."

"Big factories and so on?"

"That's it — and then they had the two site labourers placing Truscon floor units — how light they were to handle."

"All right, but what's the point of this one?"

"You tell me!"

For fifty years The Trussed Concrete Steel Company Limited, *now* Truscon Limited 35–41 Lower Marsh London SE.1 : Waterloo 6922

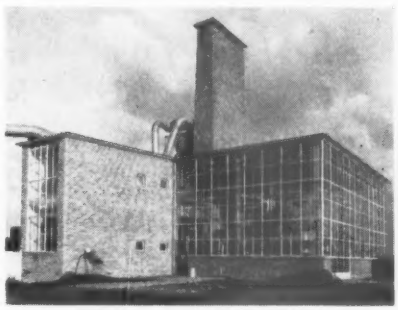


FREEDMAN UPHOLSTERING CO. LTD., BASILDON, ESSEX

J. Seymour Harris & Partners, Architects

RADIANT PANEL HEATING

* Continuous panel at high level and individual panels below eaves level give even distribution of heat. In the boiler house *(on the right)* an oil-fired Cochran boiler and a wood waste boiler together produce hot water which is circulated to the radiant heating units.



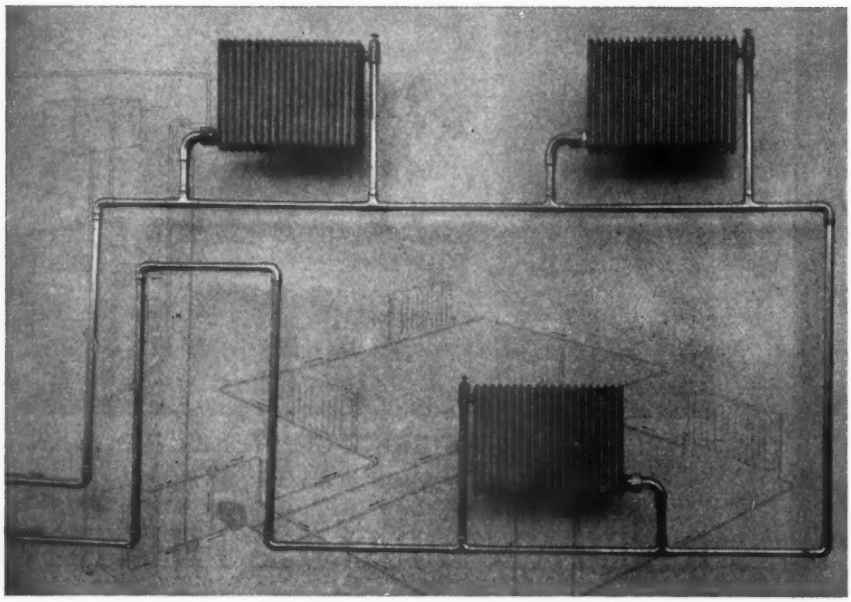
* *Extract from Publication No. 348, copies of which will gladly be sent gratis, on application to*

HOPE'S HEATING & ENGINEERING LTD

Smethwick, Birmingham & 16 Berners Street, London, W.1
Branch Offices at Leeds, Cardiff & Hull

YORKSHIRE IMPERIAL

copper tubes and fittings



first choice for

small pipe forced-circulation central heating systems

There seems to be no doubt about a bright future for the new small pipe forced-circulation central heating system —and a bright future also for **'Yorkshire Imperial' ½ in. nominal size copper tubes joined by 'Yorkshire' capillary or 'Instantor' or 'Kuterlite' compression fittings,** already proved as the ideal piping arrangement in systems now operating in private houses.

The smooth, internal surface of 'Yorkshire Imperial' copper tubes reduces friction to an absolute minimum—the tubes offer a minimum dissipation of heat from the flow pipes—by reason of their extreme unobtrusiveness (especially when 'Yorkshire' capillary fittings are used) pipelines can be run on the surface to follow the skirting, door frames or window mullions—they can be painted to match the decor—and the greatest cost saving of all (apart from the obvious one of no maintenance charges) is in the speed of installation.

'Yorkshire Imperial' copper tubes for this work can be supplied in half-hard temper 18 ft. straight lengths to B.S. 659, or in soft temper coils up to 60 ft. in length, to B.S. 1386, where it is essential to run piping under the floors.

Consult us about your tubes and fittings requirements now.

YORKSHIRE IMPERIAL METALS LIMITED

HEAD OFFICE—P.O. BOX 166, LEEDS

TELEPHONE: LEEDS 7-2222

Inherent fire resistance at 4d* per sq. ft.

There is no safer method of lining a building at a comparable cost than with plasterboard. The core of all plasterboard is gypsum which contains about 20% combined water—an inherent protection in the event of fire.

Plasterboard has other advantages to the builder and the building's owners. Easy to handle, strong, safe, simple to erect and decorate, plasterboard has everything to recommend it *—and it's British throughout.*

SAFE, LOW COST THERMAL INSULATION

Insulating Gypsum Plasterboard provides thermal insulation, without fire hazard. At 5d.† per sq. ft. for thermal insulation AND fire protection it saves money. Insulating Gypsum Plasterboard conforms on both faces to B.S.476, Class I, *and does not require any additional treatment involving further cost.*

* *Approximate price of Plain Plasterboard*

† *Approximate price of Insulating Plasterboard*

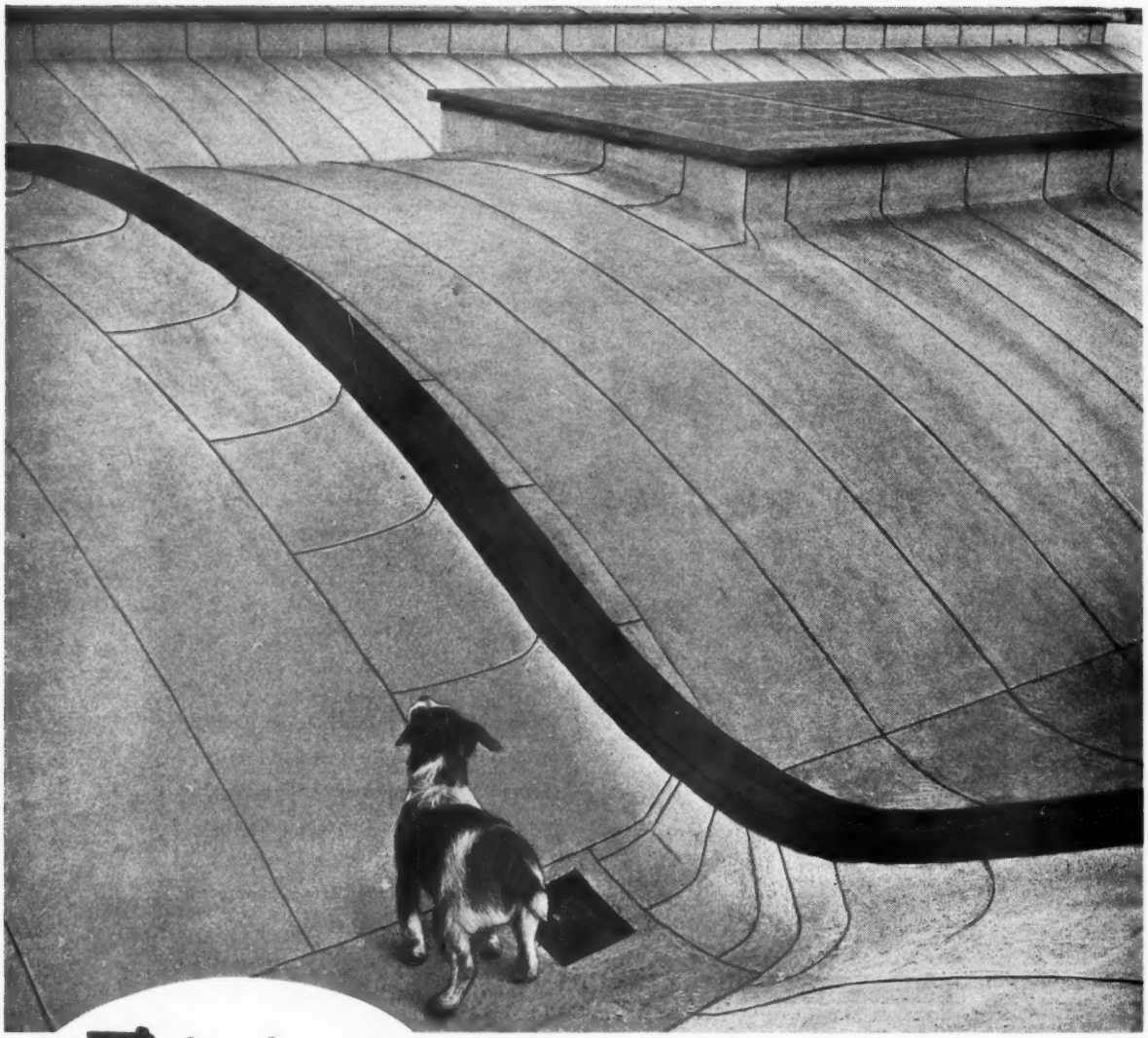
It's the core that counts . . .

THE INCOMBUSTIBLE GYPSUM CORE OF PLASTERBOARD

FOR THE FACTS write today for free illustrated brochure
THE GYPSUM PLASTERBOARD DEVELOPMENT ASSOCIATION, G.P.O. BOX 321, LONDON W.1



GPA.2



This is a bit steep

It's no place for a dog, and that's for sure. But it's convenient to have over your head for all that. It's lightweight long-lasting TRINASCO Built-up Felt Roofing by Limmer & Trinidad . . . the perfect roofing for buildings of all kinds. It looks attractive, too, and can be laid to any specification you require. Moreover, as part of the Limmer & Trinidad Roofing Service, expert technical staff is at your service from start to finish—they'll be particularly glad to advise you as to the system of insulation you may need. If you would like further details, we'll be pleased to send you a leaflet.

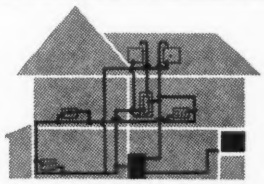
LIMMER & TRINIDAD

BUILT-UP FELT ROOFING

THE LIMMER & TRINIDAD LAKE ASPHALT COMPANY LIMITED, TRINIDAD LAKE HOUSE, 232-242, VAUXHALL BRIDGE ROAD, LONDON, S.W.1.



'Open plan' living is here!



Plan well ahead

with the help of the Esso Home Heating Advisory Service. Write to the address below and arrange a meeting.

Esso HOME HEATING OILS

'Open Plan' living requires a heating system which heats an area equivalent to several rooms at once. Oil-fired heating does this automatically, economically and with the minimum of attention. Moreover, with a choice of panel-type heating, radiators, skirting-board heating or warm-air circulation, the architect can harmonise the heating system with other features of his design.

Oil-fired central heating works unseen

A further advantage of this system is that all the pipes, radiators and equipment can be OUT OF SIGHT*—leaving the architect completely free to produce a clean plan, unhindered by fireplaces and chimneys.*

Consider oil-fired central heating at the earliest stage of your planning.

HOME HEATING DEPARTMENT, (AM) ESSO PETROLEUM CO., LTD., 36 QUEEN ANNE'S GATE, LONDON, S.W.1

FRENGER HEATED & ACOUSTIC CEILINGS

do you realise

MILLIONS of square feet are erected EACH YEAR

price has been reduced by 12½%

Commercial Banking Co. of Sydney Ltd. Architects: Waterhouse & Ripley, P.P./F.R.I.B.A.



Write for more details to:

FRENGER CEILINGS LTD · 7-12 TAVISTOCK SQUARE · LONDON · W.C.1 Telephone: EUSton 6084/3

12 HARTER STREET, MANCHESTER, 1 · *CENTRAL 4612* · 65 BALFOUR AVENUE, BELFAST . *BELFAST 28768*



'UNIVERSAL' SIMPLIFICATION

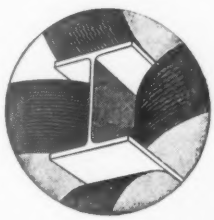
Our new Universal Beam mill is now at work rolling beam sections in a wide range, from 36 in. by 16½ in. down to 8 in. by 5¼ in. In planning this new range, the needs of the designer have been studied closely, and each section is available in different weights to suit the loads to be carried.

Designers are already reaping the benefit of simplification—for many of the beams are larger than any hitherto rolled in Europe. They can be used, direct from the mill, for bridge spans which have previously needed expensive fabrication.

We also roll 'H' sections for columns (ranging from 6 in. by 6 in. up to 14 in. by 16 in.) in related 'families' of different weights, so that the increased column-loading at the lower storeys of tall buildings may be met by simple sections without riveted-on flange plates.

The range of British Standard beams, channels and angles continues to be available.

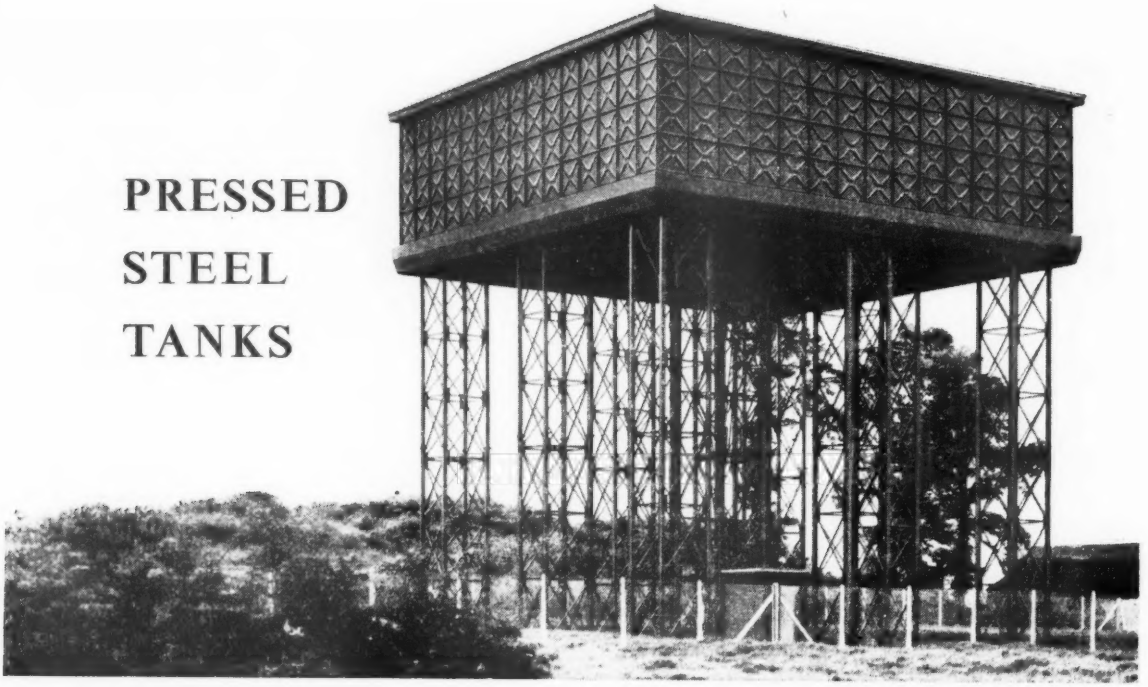
Diagram showing the arrangement of the rolls, which are adjustable to control the flange and web thickness. Other rolls, not shown, size the edges.



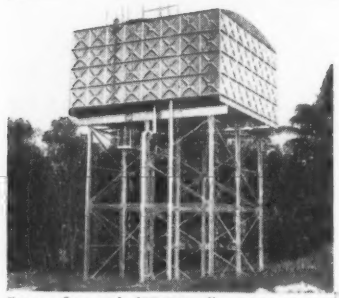
EARLY DELIVERY OF THE FULL RANGE OF SECTIONS

DORMAN LONG

PRESSED STEEL TANKS

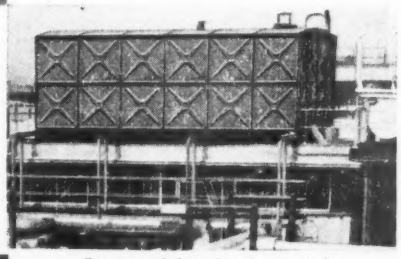


Storage for 340,000 gallons at 52 ft., Southam, Warwickshire. Consulting Engineers W. Herbert Bateman & Partners.



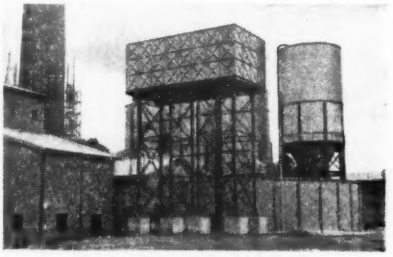
Storage for nearly 100,000 gallons supplied for the Public Works Department, Kuala Lumpur, Malaya.

Unit constructed Braithwaite Pressed Steel Tanks with or without steel supporting structures can be supplied in an unlimited range of capacities. The technical advisory service of Braithwaite & Co. Structural Limited is available to assist those concerned with the installation of tanks for both conventional and unusual storage needs or for any other requirement for which the unit method of construction is suitable.

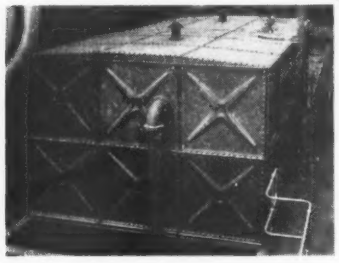


Supported on steel grillages, one of many covered tanks erected at a power station near London. Consulting Engineers Merz & McLellan.

Storage tank for softened water at the Isle of Grain Oil Refinery. (Photograph courtesy Tothill Press Ltd.)



Industrial development, Malaya. Water storage tank at the new works of Malayan Cement Ltd.

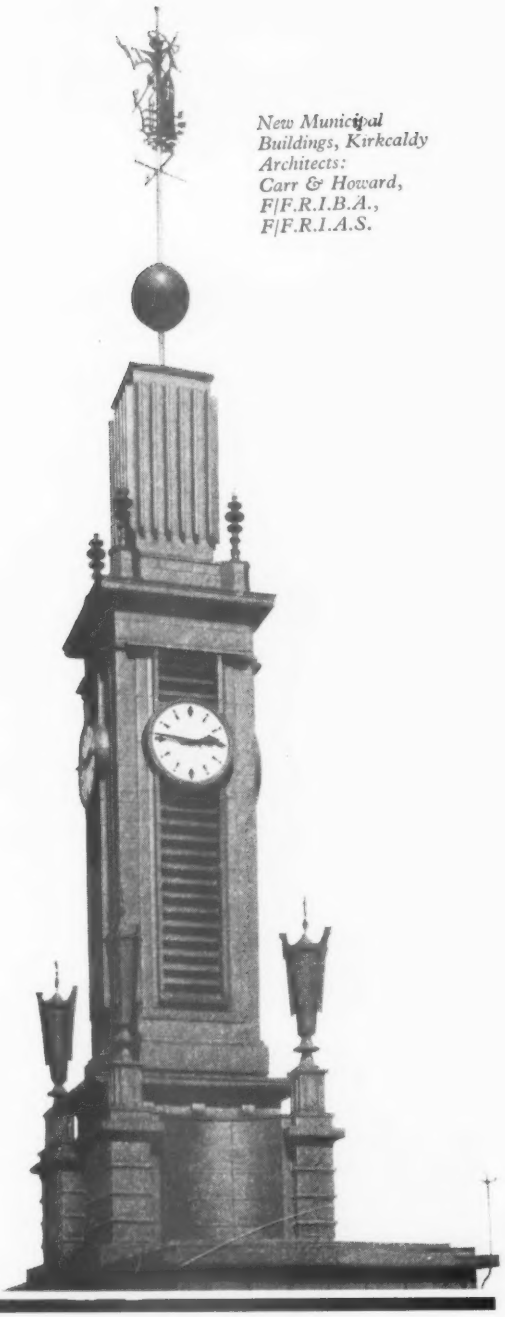


BRAITHWAITE & CO. ENGINEERS LIMITED

BRIDGE AND CONSTRUCTIONAL ENGINEERS

LONDON OFFICE: DORLAND HOUSE, REGENT STREET, LONDON SW1 TEL: WHITEHALL 3993

The Test of Time



New Municipal Buildings, Kirkcaldy
Architects:
Carr & Howard, F/F.R.I.B.A., F/F.R.I.A.S.

This clock tower that adorns the New Municipal Buildings in Kirkcaldy, Scotland, was copper sheeted by BRABY craftsmen. Exposed as it would be to the full rigours of British weather blowing in from the North Sea, no loophole could be left for the searching fingers of wind and rain, of cold and heat. It thus demanded workmanship of the highest order, for this alone would stand the test of time. The BRABY Company has been engaged in the supplying and on-site fixing of copper roofing for Cathedrals, Churches, Municipal Buildings, Docks and Harbours, etc., for over a century. Its consultative staff is always ready to advise about laying copper on flat or pitched roofs or domes.

BRABY Copper Roofing

ONE OF THE WIDE RANGE OF
BRABY
ACTIVITIES

FREDERICK BRABY & COMPANY LIMITED
Head Office: 352-364 EUSTON ROAD, LONDON, N.W.1. TELEPHONE: EUSton 3456
OTHER FACTORIES AT: London Works, Thames Road, **Crayford, Kent.** TELEPHONE: Bexleyheath 7777
Havelock Works, Aintree, **Liverpool, 10.** TELEPHONE: Aintree 1721
Eclipse Works, Petershill Road, **Glasgow, N.** TELEPHONE: Springburn 5151
Ashton Gate Works, **Bristol, 3.** TELEPHONE: Bristol 64041. And **Falkirk**
OTHER OFFICES: 110 Cannon Street, **London, E.C.4.** (Export) TELEPHONE: MANsion House 6034
Queen's Buildings, 10 Royal Avenue, **Belfast.** TELEPHONE: 26509
Palace Street, **Plymouth.** TELEPHONE: 62261

AP60

Satina fittings

win the Design Centre 1958 award



Extract from the judges' comments, published in *Design*

'The judges have chosen this range of pendant fittings and this particular shade (though others almost as good are available in the range) for these fine points—the quality of the satin-finished opal glassware, which is attractive both lit and unlit; the delicacy of the bracket arms; the unostentatious use of brass in combination with black rods; and the general elegance of the range in all sizes.'

The Satina range of fittings, like all A.E.I. lighting equipment, was developed by the company's design staff in collaboration with a leading industrial design consultant.

A·E·I
Lamp and Lighting Co Ltd

Lighting Dept., Melton Road, Leicester

M4788



COLONNADE AT CONNAUGHT PLACE, LONDON W.2.

ARCHITECTS:
Kenneth Wakeford, Jerram & Harris,
7 Connaught Place, London W.2.

CONTRACTORS:
W. Carter Ltd., 73 High St., St. Johns Wood, London N.8.

Portland Stone supplied and fixed by

BPSF

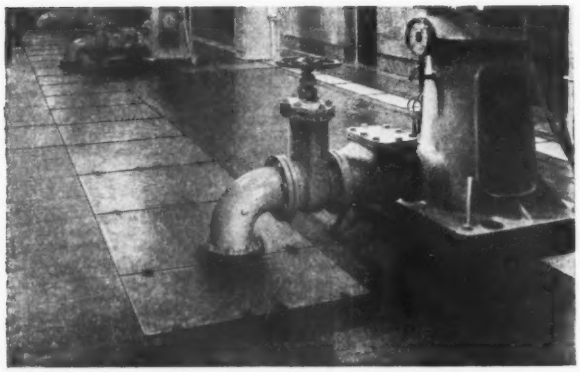
THE BATH & PORTLAND STONE FIRMS LTD.

Head Office: BATH Telephone 3248/9

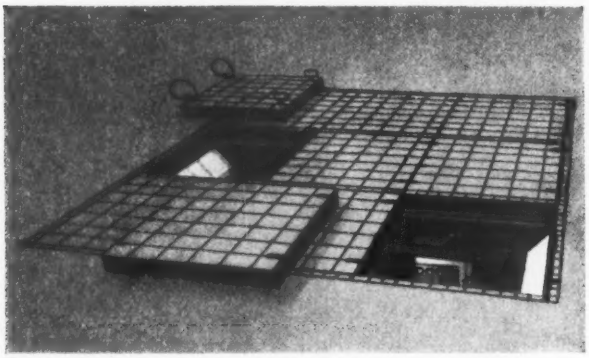
LONDON	PORTLAND	GLASGOW	DUBLIN	LEEDS	LIVERPOOL	BELFAST
(VICtoria 9182/3)	(2276)	Bridgeton 2408)	(51018)	25971	(ROYal 6501)	(31444)

ELKINGTON Gatic

NON-ROCKING · AIR-TIGHT & WATER-TIGHT
COVERS and FRAMES



'Elkington Gatic' medium light duty duct covers, installed in Kings Road Pumping Station for the Bury St. Edmunds Corporation.



'Elkington Gatic' heavy yard multiple part cover—size 96″ × 120″ clear opening — 9 in No. covers supported by 2 in No. removable beams installed over Electricity Sub-Station in Switzerland.

Non-rocking, water-tight and air-tight are permanent, undeteriorating features of every 'Elkington Gatic' Cover and Frame.

Whether designed for light foot traffic or heavy fast-moving road traffic the special casting technique scientifically embodied in 'Elkington Gatic' Covers and Frames ensures they retain their 'as cast' true metal to metal register giving a long life of service free from subsequent distortion.

'Elkington Gatic' Covers and Frames can be supplied in any length and span (up to 4′ 0″ with use of cross supports), also available are 'Elkington Gatic' non-rocking Gratings in any length and span of 6″ to 18″ in multiples of 3″. Wholehearted co-operation and advice will gladly be given to solve any cover and frame problem which may arise.

FOR ALL PURPOSES

ELKINGTON GATIC COVERS (Recessed)

ROADWAYS
(All types of surfacing) Works entrances and private roads.

YARDS, DOCKS, GARAGES
For Heavy, Medium and Light Traffic

PAVEMENTS, FACTORIES, STATIONS, PATHS and SCHOOLS
For Heavy, Medium and Light Loads and Dead-weight Loads

ELKINGTON GATIC UTILITY COVERS, GRATINGS and FRAMES

MULTIPLE COVERS

DUCT and TRENCH COVERS

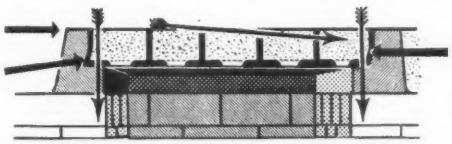
and for

GAS and WATER SERVICES

★
OVER 3,000,000 ELKINGTON GATIC COVERS & FRAMES IN SERVICE THROUGHOUT THE WORLD.

WHY ELKINGTON GATIC COVERS & FRAMES
ARE NON-ROCKING · AIR-TIGHT & WATER-TIGHT

AN ELKINGTON COVER (OR GRATING) FITS NOT ONLY UPON BUT ALSO WITHIN THE CORRESPONDING INTERNAL SURFACES OF ITS FRAME

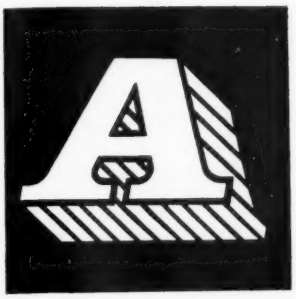


ELKINGTON COVERS POSSESS A SOLIDITY WHICH WITHSTANDS HEAVIEST TRAFFIC.

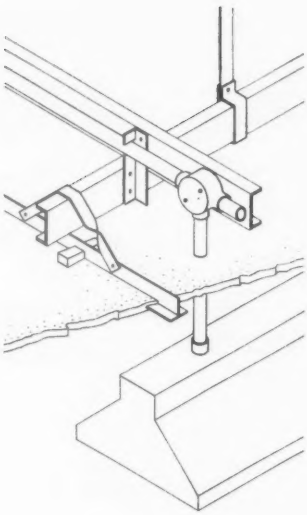
SUBSTANTIAL METAL TO METAL CONTACT THROUGHOUT

INTERPOSITION OF GREASE FILM RENDERS THE CONTACT BOTH WATER- AND GAS-TIGHT.

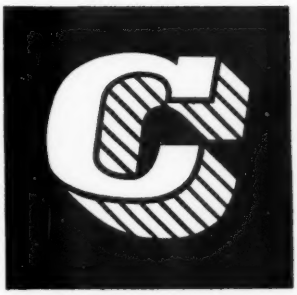
THE DOVER ENGINEERING WORKS Ltd. Talbot House · Arundel St. W.C.2. Cov. 0834



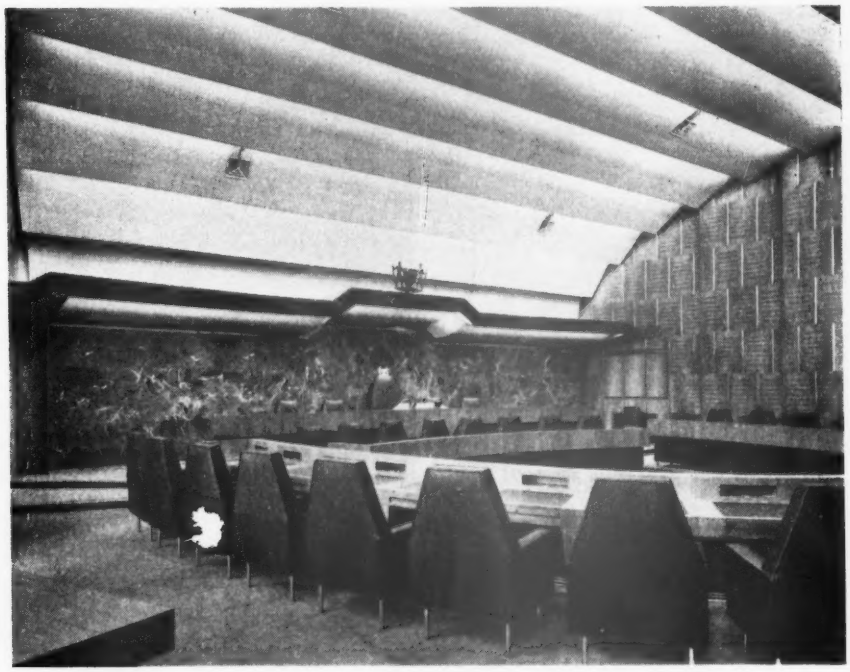
CASEBOOK No. 3



Most architects will agree that to provide one structure to support a suspended ceiling and another separate one to support light fittings and wiring is wasteful. A.C.C., in collaboration with the staff architects, have rationalized this problem in a number of stores for Messrs. F. W. Woolworth. Here the ceiling support grid carries all lighting fittings and conduits. We are well-equipped to deal with special designs where ceilings and lighting are to be integrated.







In the new Civic Centre at Wood Green (Architects: Sir John Brown, A. E. Henson and Partners; Partner in charge: J. E. S. Sayers, A.A. Dip., A.R.I.B.A.) A.C.C. provided a special ceiling incorporating concealed lighting and having a special profile. The material used was asbestos insulation board and A.C.C. contract included acoustic wall panelling in elm veneered boards with polished brass jointing strips.

ANDERSON CONSTRUCTION COMPANY LIMITED · Clifton House · Euston Road · London N.W.1 · Tel: EUSton 7465



Wallpaper No. C.855. Drawing by Dennis Bailey
Chair manufactured by Strassle Sohne & Company, Switzerland

A SERVICE FOR ARCHITECTS

The primary purpose of our ARCHITECTS' DEPARTMENT is to give advice on the use of wallpaper, but we welcome inquiries relating to the interior scheme of decoration as a whole. Our products may be seen at the Showrooms in London and Manchester, and if required we can provide a complete specification incorporating wallpaper, paints, furnishing fabrics and floor coverings. The Architects' Showroom in London is reserved exclusively for the use of Architects, Interior Designers and their clients.

THE ARCHITECTS' DEPARTMENT
THE WALL PAPER MANUFACTURERS LIMITED 19/21 MORTIMER STREET LONDON W1
OR KING'S HOUSE KING STREET WEST MANCHESTER 3

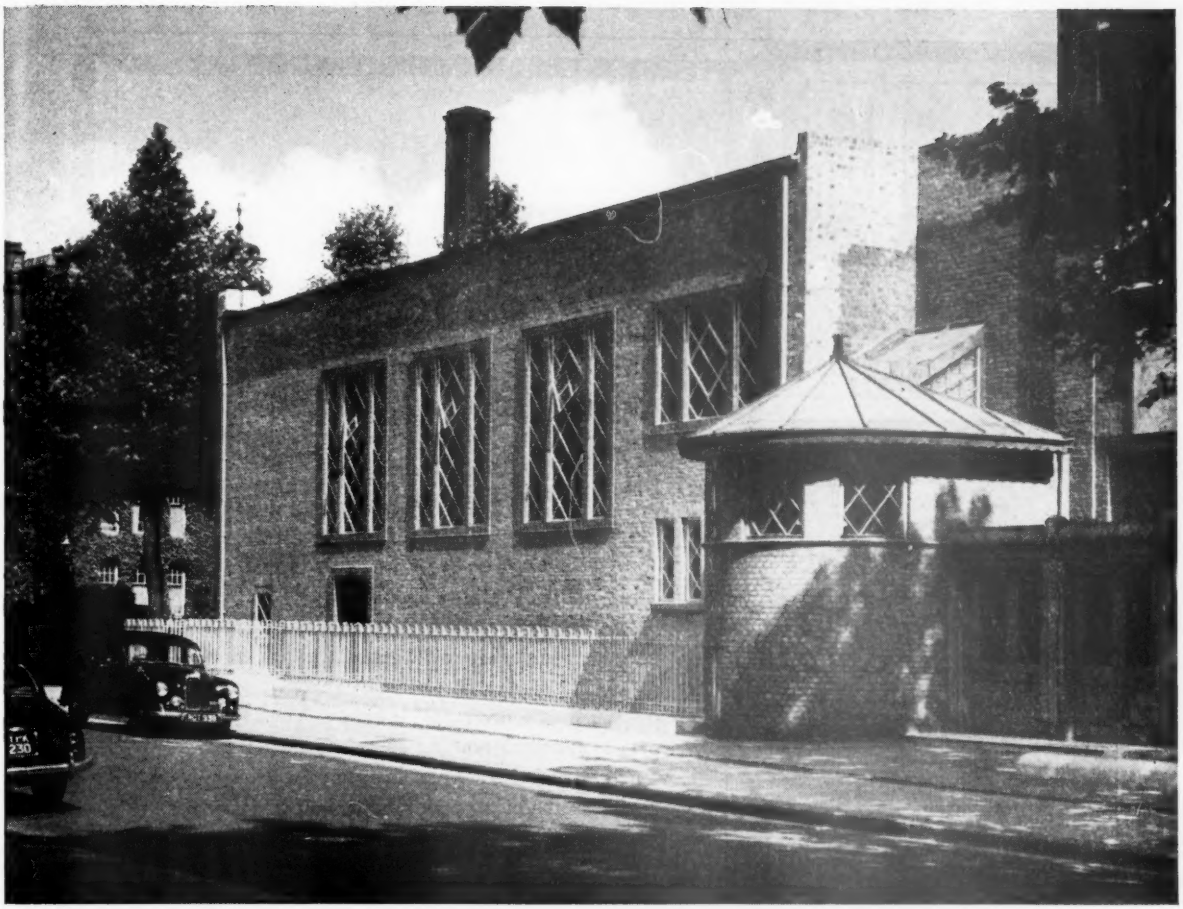


PHOTO: E. E. CRISFORD

ASSEMBLY HALL FOR WESTMINSTER TECHNICAL COLLEGE TO BE SURMOUNTED LATER BY ADDITIONAL CLASSROOMS

ARCHITECTS	CONSULTING ENGINEERS	QUANTITY SURVEYORS
H. S. GOODHART-RENDELL, P.P.R.I.B.A. *H. S. GOODHART-RENDELL, BROADBENT & PARTNERS*	*THOMAS BEDFORD & PARTNERS*	*SELBY & SANDERS*

The **Demolition & Construction** Co. Ltd.

D&C

LONDON · CARDIFF · LIVERPOOL · NEWCASTLE-ON-TYNE

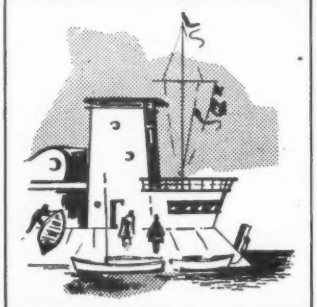
FWS



NEW!

RUBEROID

COPPER ROOFING



Traditional roofing with Important extras

Copper gives to roofs a special character; its use is almost traditional. Now, the introduction of Ruberoid Copper Roofing provides a method of roofing in copper which reveals new horizons for the building designer. These additional features as well as the best characteristics of copper are secured when you specify Ruberoid Copper Roofing:

* Copper, bitumen and glass fibre laminated into a single sheet gives a bonus in weather protection.
* All seams and laps are completely sealed.
* There is a choice of traditional seams, batten rolls or flat laps.
* The indented surface allows for expansion and contraction.
* No work-hardening of copper during fixing.
* Elimination of wind drumming.



Ruberoid Copper Roofing consists of copper sheet with an indented surface, laminated with glass fibre based bitumen sheeting. It is employed always with Ruberoid Reinforced Glass Fibre Based Underlay to which it is bonded with bitumen compound. Technical literature available on request.

PUBLIC WORKS AND MUNICIPAL SERVICES EXHIBITION

Stands 434/435 Grand Hall, Gallery

THE RUBEROID COMPANY LIMITED

642 Commonwealth House, 1-19 New Oxford St., London WC1
Telephone: Holborn 8797 (10 lines) and 9501 (5 lines)
Branches: Belfast, Birmingham, Bristol, Edinburgh, Glasgow, Manchester, Newcastle-on-Tyne, Nottingham



KEEP THEM IN THE CLEAR

A Series of informative articles on smokeless coke and gas appliances

is appearing, giving technical data and information on installation.

The following, together with binder, are now available

from your Area Gas Board or from the address below:

Sections 1, 2, 3, 4

THE GAS COUNCIL, (Department A), 1, Grosvenor Place, London, S.W.1.



Architects: Messrs. Farmer and Dark, F/F.R.I.B.A.

New Central Research Laboratories and Engineering Division for The Bowater Paper Corporation Limited

Part of the extensive developments on the Thames Mill Site at Northfleet, Kent, of The Bowater Paper Corporation Limited, are the Central Research Laboratories and Engineering Division blocks. These have a combined floor space of 55,000 sq. ft. served by a common entrance hall (illustrated). The structures are based on a module of 3 ft. 4 in. in all planes, with a framework of light welded steel and lightweight metal decking roof. Walls are almost entirely of glass with stainless steel trimming, and colour variation is obtained by asbestos panels set behind. Floors are in 2-in. precast concrete and acoustic ceilings accommodate recessed lighting, heating and ventilation grills. The colourful interior decoration combines individuality with breadth of design, while the exterior preserves the unity of the neighbouring production buildings.

THE CUBITT GROUP OF COMPANIES
UNITED KINGDOM AND OVERSEAS

With the experience of the past

CUBITTS

build for the future

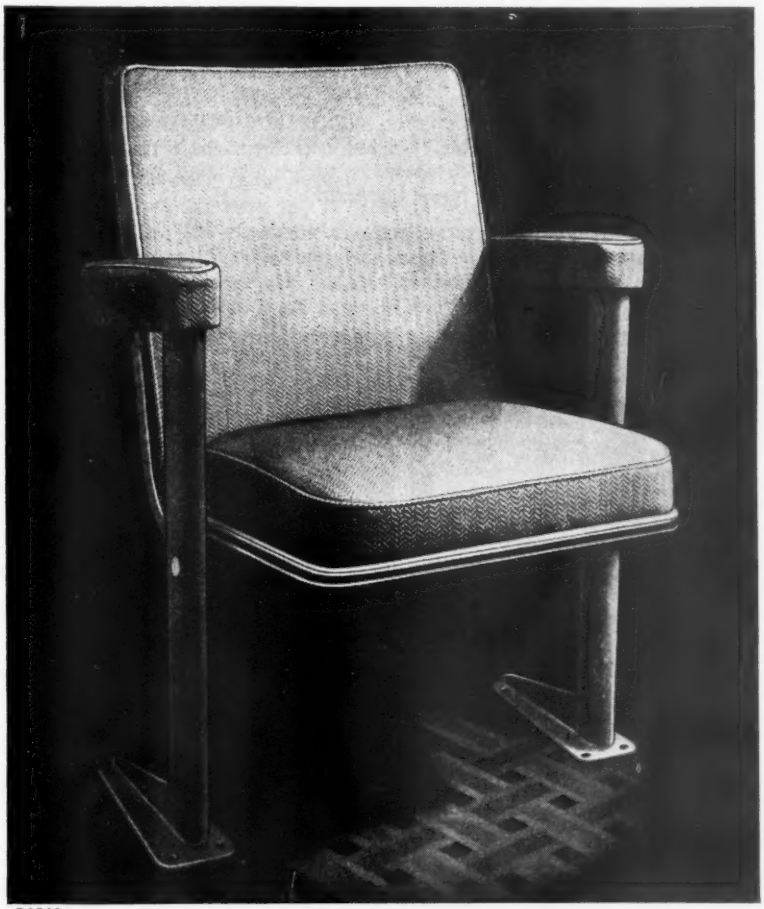
HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN) LTD. · ONE QUEEN ANNE'S GATE · LONDON · SW1

TGA C243

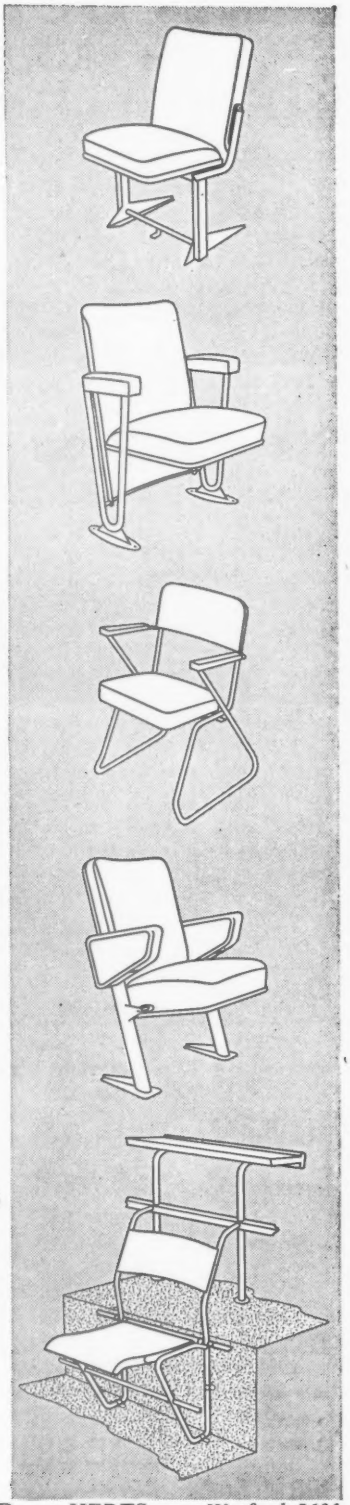
Auditorium seating

Both in this country and abroad, the reputation gained by Cox for tip-up seating is exceptionally high. For example, they were chosen for the installation of the Royal Festival Hall and of the Free Trade Hall, Manchester. In Venezuela they installed the seating for the great conference hall of the Instituto de la Ciudad Universitaria at Caracas.

Cox are concerned not only with large installations: here are shown models suitable for various sizes of hall.



G1312



G1311

G3084

G2203

RFH1

G2444

Full technical information and price details sent on request

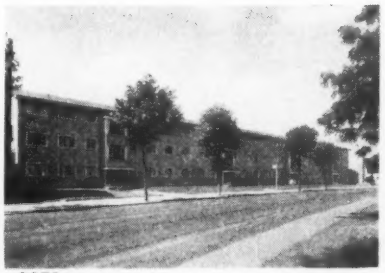
Cox TIP-UP AUDITORIUM SEATING

COX & CO. (WATFORD) LTD · WATFORD BY-PASS · WATFORD · HERTS · *Watford 5631*

200 BLOCKS OF FLATS IN LONDON
WITH BRODERICK INSULATED COPPER ROOFING



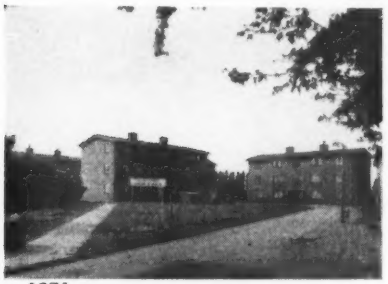
1949 Flats at Doddington Grove, Southwark
Architects: Gordon Jeeves



1950 Alexander Court, West Side, Wandsworth
Architects: Scherrer & Hicks, M.A., F.F.R.I.B.A.



1951 The Grove Estate, Pinner
Architects: James & Bywaters



1951 Flats at Strathville Road, Wandsworth
Architect: Wandsworth Borough Architect

Since 1948 we have roofed over 200 blocks of flats in the London area alone, as well as many hundreds of other buildings such as Churches, Schools, Halls, Hospitals, Banks, Municipal Buildings and Houses in all parts of Great Britain.

We design, supply and erect complete "everything above the wall plate" and an illustrated folder giving details of BRODERICK INSULATED COPPER ROOFING and our prefabricated "trussed rafter" system of roof framing is available on request. We shall be pleased to submit a scheme and estimate for any suitable job from a single house upwards.

AGENTS FOR BRODERICK ROOFING

SCOTLAND: Geo. Nelson & Sons, 101 St. Vincent St., Glasgow, C.2.
N. IRELAND: W. H. Beckett & Co. Ltd., 32 Ann St., Belfast.
EIRE: Strangford Ltd., 72 Francis Street, Dublin.



1952 Broadfields Avenue, Edgware
Architect: Hendon Borough Engineer and Surveyor



1953 L.C.C. Faylands Estate, Wandsworth
Architects: Gotch & Partners



1954 Leigham Court Estate, Streatham
Architect: W. F. Howard, F.R.I.B.A., F.R.I.A.S.



1955 Broadhurst Gardens, Hampstead
Architect: Richard S. Nickson, M.A., F.R.I.B.A., A.A.Dip.



1956 Pelican Yard, Camberwell
Architect: F. O. Hayes, A.R.I.B.A., Camberwell Borough Architect



1958 (Still in Progress) Longheath Estate, Croydon
Architects: Scherrer & Hicks, M.A., F.F.R.I.B.A. in collaboration with the Borough Engineer, A. F. Holt, M.I.C.E.

BRODERICK INSULATED STRUCTURES LTD.
HERMITAGE ROAD, WOKING, SURREY. Telephone: Brookwood 2266

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1

Telephone: LANGHAM 5533
Telegrams: RIBAZO WESDO LONDON

NOVEMBER 1958 THIRD SERIES VOL. 66 NUMBER 1 THREE SHILLINGS AND SIXPENCE

EDITORIAL

The Royal Fine Art Commission

The Queen has been pleased to approve that Sir John Leslie Martin, Ph.D. [*F*], Professor of Architecture in the University of Cambridge, be appointed a member of the Royal Fine Art Commission in succession to Sir Howard Morley Robertson, M.C., D.Litt. (Reading), R.A., Past President, who has resigned on account of increasing professional commitments.

Architect and Engineer: Joint Meeting

Both Mr. Jefferiss Mathews in the September JOURNAL and Mr. Ove Arup in the PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS in October, have drawn attention to the necessity of collaboration between architects and engineers at all stages of a project if both disciplines are to give of their best. The way in which such collaboration may be achieved is to be discussed at a joint meeting of the two societies at 5.30 p.m. on Tuesday, 20 January 1959 at the Institution of Civil Engineers.

Mr. Mathews and Mr. Arup are each to present papers for discussion, in which it is hoped that as many engineers and architects will take part as possible. The papers will not be published in the R.I.B.A. JOURNAL or the PROCEEDINGS of the I.C.E. before the meeting, but advance copies will be available to members of the two societies about three weeks before the meeting. Members of the R.I.B.A. should apply for copies to the Secretary, R.I.B.A. Those who wish to take part in the discussion are asked to inform the Secretary of of the Institution of Civil Engineers as soon as possible. The advance copies of the papers are primarily for those who attend the meeting. The papers and discussion will be published in full in due course in the journals of the two societies.

Tax Relief on Professional Subscriptions

Members will recall that in May we commented on the Chancellor of the Exchequer's undertaking in the Finance Bill to 'meet one point that has been pressed upon me in connection with the Schedule E expenses rule. This will enable some deduction to be claimed in respect of subscriptions to professional societies with activities relating to an employee's work and for certain statutory registration fees'. It was not clear at the time what was meant by 'some deduction' or which professional societies would be approved for the purpose.

The Institute has now been informed, however, not only that its application to be included in the list of eligible societies has been approved but also that the *whole* of the annual R.I.B.A. subscription paid by members will be allowable 'as a deduction from emoluments assessable to income tax under Schedule E'. This means that all salaried members can now obtain income tax relief on their R.I.B.A. subscription instead of being dependent upon the willingness of an employer to certify that membership is both a condition of engagement and a continuing condition of employment. This redress of a long-standing grievance brings to a wholly satisfactory conclusion the concerted efforts over many years of several professional societies, among which the R.I.B.A. has been particularly prominent.

All salaried architects who are not already granted tax relief are asked to obtain a form P358 from their local tax office as soon as possible after 31 October 1958. The first subscription on which relief will be granted will be that payable on 1 January 1959.

The Architects' Registration Council also qualifies for full exemption of income tax on the retention fee.

The Structurals' Jubilee

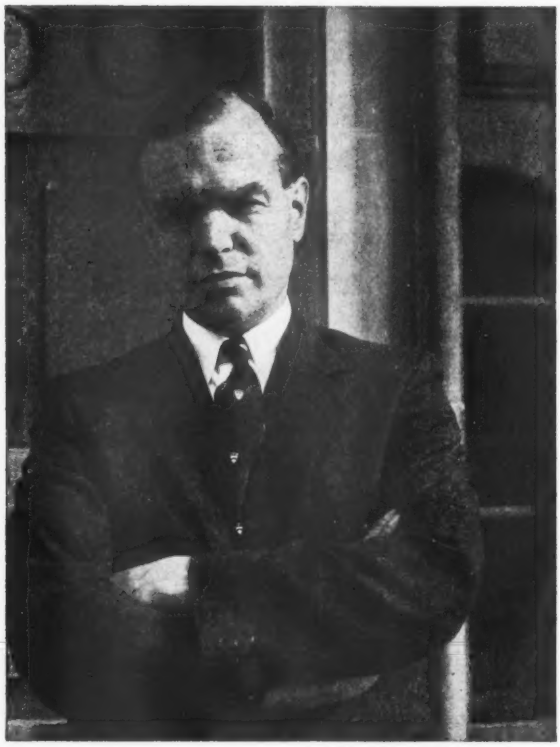
The Institution of Structural Engineers celebrated its fiftieth anniversary last month during which a Conference was held at the Institution Headquarters at 11 Belgrave Square, and an exhibition of over 300 photographs at Leighton House.

The close and valuable relationship with the R.I.B.A. has existed since the foundation of the Institution in 1908 when the Concrete Institute as it was then called, was formed to bring together those who designed or built in concrete, and particularly, reinforced concrete.

By 1922 a similar need was felt by those who designed or built in structural steelwork, and accordingly the scope of the Concrete Institute was widened to include them. It was then re-named the Institution of Structural Engineers.

In 1934 came the granting of the Royal Charter of Incorporation, and membership today stands at 8,000 or more.

When he opened the Leighton House Exhibition, Sir Hugh Beaver, President of the Federation of British Industries, said he was not sure how to define the qualifications of a structural engineer. 'Like the famous epitaph of Christopher Wren (who would certainly have qualified to be a structural engineer if he had not perhaps failed by his faulty knowledge of soil structure and load bearing!), if you require justification (that is my own slight amendment) look round.'



The New Secretary

Mr. Gordon Ricketts, M.A., who is at present Secretary for Professional Relations, has been appointed as the new Secretary for the Royal Institute. He will take up his duties in July 1959 on the retirement of Mr. C. D. Spragg, C.B.E.

Mr. Ricketts was educated at St. Lawrence College, Ramsgate, and Keble College, Oxford, where he graduated with Honours in English Language and Literature. For a short period before the war he was a schoolmaster while waiting to go up to Oxford. He served in the Royal Air Force from 1940 to 1946, first on loan to the United States Navy as a flying boat pilot in the Gulf of Mexico, and later as a flying instructor in the Oxford University Air Squadron. He was released with the rank of Flight Lieutenant. From 1948 to 1951 he served in administrative positions on the staff of the Federation of British Industries. From 1951 to 1956 he was Appointments Secretary at the University of Nottingham.

Council Business

A meeting of the Council was held on 7 October, with Mr. Basil Spence, President, in the Chair.

The Executive Committee had unanimously recommended Mr. Gordon Ricketts, at present Secretary for Professional Relations, as Secretary of the Royal Institute of British Architects, to take up his duties in July 1959 on the retirement of the present Secretary. The Council approved the recommendation. Mr. Spragg congratulated his successor and Mr. Ricketts thanked the Council and said he looked forward to a very exciting tour of office.

The Institute was invited by the British Iron and Steel Research Association to appoint a member to give a paper at the Civil and Structural Engineering Conference on 'Iron and Steel Works Buildings', to be held in 1959.

It was agreed to invite Mr. Frederick Gibberd [*F*] to act and Mr. Gibberd has accepted.

The Council gave approval to the award of R.I.B.A. Architecture Bronze Medals by the following Allied Societies in their respective Areas:

(i) By the Jury of the Devon and Cornwall Society of Architects for the four-year period ending 31 December 1957, in favour of the Woodford County Primary School, Plympton, designed by R. N. Guy [*A*], County Architect, Devon County Council.

(ii) By the Jury of the Norfolk and Norwich Association of Architects for the three-year period ending 31 December 1957, in favour of the Housing Group at Gillingham for Loddon Rural District Council, designed by Messrs. Tayler and Green (Herbert Tayler [*F*] and David John Green [*F*]).

(iii) By the Jury of the Northern Architectural Association for the three-year period ending 31 December 1957, in favour of St. Cuthbert's Church, Peterlee, designed by Messrs. Cordingley and McIntyre (Donald McIntyre [*F*] and Matthew Hayton [*F*]).

(iv) By the Jury of the Suffolk Association of Architects for the three-year period ending 31 December 1957, in favour of the Castle Hill Congregational Church, Ipswich, designed by Messrs. Johns, Slater and Haward (Martin J. Slater [*F*] and Birkin Haward [*A*]).

Liaison between the Royal Institute and Allied Societies Overseas is to be strengthened by a tour of the President and Secretary to Africa next spring.

The new Headquarters building of the Institute of South African Architects in Johannesburg, for which a competition was held, will be formally opened by the Governor-General of South Africa towards the end of March 1959.

The Council wholeheartedly approved the acceptance by the President and Secretary of the enthusiastic invitation extended to them by the Institute of South African Architects to be present at the opening ceremony and also to visit other centres in South Africa. The President will be accompanied by his wife.

It was also agreed at the same time to take the opportunity of visiting the other Allied Societies in East Africa, Rhodesia and Ghana, from whom warm invitations have also been received. Details of the itinerary are now being worked out.

The Council noted that Professor R. J. Gardner-Medwin [*F*] had agreed to act as Liaison Officer between the recently formed British Architectural Students' Association and the R.I.B.A. Council.

The Council agreed to lend the R.I.B.A. building for the holding of a ball on Friday 19 June 1959 in aid of the Architects' Benevolent Society.

Other notes from the Minutes of the Council appear on page 32.

On the day following the Council meeting on 7 October, the President, Mr. Basil Spence, held an informal conference for the editors of architectural journals.

This is a new idea and will be a regular practice.

As the President said in his introductory remarks the Institute has nothing to hide and these meetings will give an opportunity to the technical press to ask questions and to hear about the work of the Council.

Better prospects for 1959?

Cautious hopes of a modest increase in public investment in buildings were raised in mid-October, when the Chancellor of the Exchequer announced a resumption of the increase in the capital available for investment in the public sector. The total in 1959–60 is likely to be appreciably higher than this year or last, he said.

This announcement, coming just twelve months after the decision that public investment during the two years 1958–59 and 1959–60 would be held at the 1957–58 level of £1,500 million, should provide some stimulus to new building before the present slow downward trend in output becomes more serious. There will no doubt be pressure to restore the cuts made a year ago in the schools programme for rural reorganisation and minor improvement projects, in the Post Office building programme and in local authority house building—though government policy towards the latter may well be influenced by the increasing contribution to new housing being made by private builders. The prospects for the nationalised industries, whose programmes were also cut, are less certain: for instance the failure of the demand for electricity to grow as expected in the last year or so may have reduced the need for the major expansion in the power station programme originally envisaged. Road building on the other hand possibly offers scope for a further increase in investment.

Building prospects in the private sector, other than housing, are not particularly encouraging. The process of absorbing recent capital development, coupled with the present less rapid extension of markets, has meant that investment plans in industry and commerce are not likely to respond quickly to the relaxation of credit restrictions in the summer. While the F.B.I.'s survey of business prospects (released on 17 October) showed that industry felt more optimistic than it did four months ago, the prospects for capital expenditure on buildings in the next twelve months were less encouraging. Only 15 per cent of the firms covered expected to authorise more spending than in the previous twelve months, while 53 per cent expected to authorise less. New factory approvals in the first nine months of 1958 were nearly 30 per cent (in terms of area) below those approved in the same period of last year. The most recent forecast of expenditure by manufacturing industry on buildings, as shown by the Board of Trade sample inquiry, indicated that the 1959 level might well be 25 per cent below that achieved in 1958.

Architects should be among the first to notice when building prospects begin to improve, and their experience could throw valuable light on what is likely to happen, in this important sector of national economy. In time, we hope that the Institute's sample inquiry into new work coming to private architects will provide an indicator that will be used to guide those concerned with planning national investment policy as readily as are the statistical indicators quoted above.

It is a pity, therefore, that the response to the first inquiry, at the time of writing, has not been good enough to give reliable results—although more than half of the architects approached have gone to a lot of trouble to give the required information. The last thing the Institute wants to do is to provide an example for the next edition of that well-known book: *How to Lie with Statistics*! So much effort has therefore had to be put into chasing up missing returns that it has been necessary to postpone the second inquiry until the end of the year. This means that the practices included in the sample will receive the second questionnaire at the end of 1958, asking for details of new work separately for the last two quarters of 1958. More precise instructions on the definition of 'new work' will be given and this second inquiry will, it is promised, be much easier than the first.

Brussels Exhibition Award

A gold medal has been awarded to the British Government Pavilion at the 1958 Brussels Universal and International Exhibition by an international jury, who gave it third place. A portion of the Pavilion is to be re-erected at Olympia for next year's Daily Mail Ideal Home Exhibition.

The Czechoslovak Pavilion and the Belgian Civil Engineering Pavilion were placed first and second respectively.

The architects for the British Pavilion were Howard V. Lobb and Partners (Howard V. Lobb, C.B.E. [*F*], and John Ratcliff, O.B.E. [*F*]), with James Gardner, O.B.E., R.D.I., exhibition designer.

The British Industry Pavilion, architects Edward D. Mills and Partners [*F*/*A*], which won a silver medal, will be re-erected at Hilversum, Holland, as a Sports Hall and for congresses.

The Franco-British Union of Architects

The annual exhibition of the six premiated designs by students of the Ecole Nationale des Beaux-Arts, Paris, and by students of the British Schools of Architecture, will be held at the R.I.B.A. from Friday, 21 November to Monday, 24 November.

The exhibition will be opened by His Excellency the French Ambassador (who will also present the medals awarded to British prize winners by the French Government), at 3 p.m. on Friday, 21 November.

Cover Picture

The subject this month is a three-tiered car park in the City of Victoria, Hong Kong, built by the Government of Hong Kong, and completed in November 1957.

The building stands on land recently reclaimed from the sea and is adjacent to the new harbour ferry piers and concourse on the central waterfront of the island.

The structure is of reinforced concrete on piled foundations, with ramped access to the upper levels, and provides accommodation for 128 cars at ground level, 132 at first floor and 145 at roof level. The contract period was six months.

The members of the Architectural Office, Public Works Department, engaged on the scheme were: Architects: A. Fitch [*A*] and R. J. Phillips [*A*]; Structural Engineer: S. L. Au, B.Sc., A.M.I.Struct.E.; Electrical Engineer: B. M. Roach, Grad.I.E.E., M.A.S.E.E.; Quantity Surveyor: M. M. Luxton, A.R.I.C.S.

The General Contractor was Yick Lee & Co. Ltd.; the Piling Contractor was Hong Kong Engineering and Construction Co. Ltd. (Franki Piles); and the Electrical Sub-Contractor, China Engineers Ltd.

Films Appraisal Panel

Each year the building industry and its multitudinous suppliers consume, as the economists say, thousands of feet of 16 mm film to make the goods and services they have to offer more widely known. Each year a handful of patient members sits through showings of the results of all this expenditure, always hoping that something which it can unreservedly commend to the profession and to students will turn up to brighten the dreary picture presented by its reports in the JOURNAL. Such an event is rare. In the commercial field, it scarcely ever happens.

But the Appraisal Panel (to give it its proper name) operated by the Public Relations Committee, also sees non-commercial films. These, freed from the necessity to sell something, often make a remarkably powerful impact, their 'message' remaining in the mind long after the brash over-statements of the commercials have ceased to be laughed at.

Amongst these one might mention as outstanding the films made by the Building Research Station. They are short and clear, never attempt to say too much at once, deal in ascertained facts and the deductions to be made from them, and leave the viewer better informed about their subjects than he is likely to have been before seeing them. They are preceded by a brief glimpse of the headquarters building of the Research Station and finish with a reminder that the Department of Scientific and Industrial Research is the 'sponsor'. They are never less than good: many of them are excellent.

This suggests surely that a change in the selling methods of the 'commercials' is long overdue. The potential audience is a big one: the present audience is small. Well informed and highly critical people don't go out of their way to have their intelligence called in question, and students—the future market—laugh like the drains they find so difficult to design. We know this from the experimental programmes which are being shown in twelve schools of architecture this session. The dearth of good technical films, particularly for the earlier years, is idiotic, when measured against the amount of money put into advertising rubbish every year. Are there no firms with sufficient self-respect to throw overboard the tired, outworn, fallacious old advertising gimmicks, and let us have instead sound, well-conceived informative films which will help us to keep our technical knowledge up to date? The name of such a sponsor would not become a household word, but it would certainly be a respected office one.

Christmas Holiday Lectures

Mr. Leo De Syllas, A.A.Dipl. [*F*], is to give two informal lectures for boys and girls at the R.I.B.A. on Wednesday 31 December 1958, and Friday 2 January 1959, at 3 p.m., and has chosen as his title 'Out in the Midday Sun'. He will discuss planning and building in the 'underdeveloped' countries and his talk will be illustrated by coloured slides.

The lectures will be introduced by Dr. O. Koenigsberger, Director of the Department of Tropical Architecture at the A.A. School.

Tickets for the lectures may be obtained free on application to the Secretary. Envelopes should be marked 'Christmas Holiday Lectures' on the top left-hand corner.

Owing to the limited space available, it is requested that applications should not be made for more tickets than can be used.

Local Government Architects' Society

The Provisional Executive Committee of the Local Government Architects' Society held its second meeting on 12 September and heard reports of the Sub-Committees on Organisation and Finance, Negotiation and Membership, which had been set up at its previous meeting.

The Hon. Treasurer reported that there were now over 1,000 members of the Society. (*See page* 33.)

Have a Thought for the Postman

The Post Office is concerned about the difficulties postmen are having delivering letters through eccentrically placed letter-box apertures.

Members are asked when deciding where the letter-box is to go to try to visualise the motions to be gone through by a postman. Particular offenders are new shop fronts where the letter opening has been placed in the brickwork adjacent to the shop door but underneath the base of the display window which sometimes oversails the supporting wall by as much as nine inches.

The letter plate is therefore not only hidden from view, but is also only a few inches above the ground and necessitates the postman stooping, perhaps with a heavy sack on his back. It also takes him longer.

The Post Office suspect that this eccentric position is determined by the fact that the shop doors are wholly of glass. They point out that there is no reason why a slot should not be cut in the glass and the letter plate fixed with a backing plate.

R.I.B.A. Lecture on Fire Protection

A joint lecture on the increasingly important technique of structural fire protection will be given at the R.I.B.A. on Tuesday, 25 November, at 6 p.m. The speakers will be Mr. Eric L. Bird [*A*], Technical Research and Education Officer, The Building Centre, and Mr. S. D. Studd, Chief Building Surveyor, City Architect's Department, Manchester. Both have long experience of their subject, Mr. Bird on theoretical and research aspects and Mr. Studd on the administrative and practical side. The title of Mr. Bird's lecture is 'Structural Fire Protection Today' and of Mr. Studd's 'Whither Fire Protection.' They will discuss in particular the part which architects can play in advancing the technique of structural fire protection to ensure fire safety while maintaining economy in building. Both lectures will be illustrated with lantern slides. The Science Committee believe that fire protection technique has now reached a stage of development at which it could profitably be examined as a whole, and they hope that architects who have experience of the subject will attend the lecture and contribute to the discussion.

R.I.B.A. Diary

MONDAY 17 NOVEMBER, 6 p.m. Library Group. Mr. Kerry Downes will introduce an evening on Hawksmoor.

TUESDAY 25 NOVEMBER, 6 p.m. Science Lecture. *Fire Protection*, by Mr. Eric L. Bird, M.B.E., M.C. [*A*] and Mr. S. D. Studd.

TUESDAY 9 DECEMBER 6 p.m. General Meeting. *Comprehensive Redevelopment*, by Mr. Percy Johnson-Marshall, A.M.T.P.I. [*A*].

TUESDAY 16 DECEMBER, 6.30 p.m. Discussion on *In Situ Concrete Finishes*.

Advanced Training, Research and Development

By F. M. Lea, C.B.E., D.Sc., F.R.I.C. [*HON. A*], Director of Building Research, D.S.I.R.

A Paper read at the Conference on Architectural Education, Oxford, April 1958

THERE ARE TWO ASPECTS of post-graduate training for architects which we have to discuss—

(1) Advanced courses
(2) Research and development

Advanced courses

Let us consider first what part post-graduate courses can and should play in architectural education. The object of such courses is not to add some additional course at undergraduate level. It is to enter much more deeply into some particular subject for which the undergraduate course has provided the basis, to stretch the mind, not merely to fill it. We can find a parallel in courses in science and technology, as, for example, those for engineers at Imperial College on subjects such as concrete technology or nuclear power.

In architecture the only similar examples at present seem to be the various town planning courses and the tropical architecture course at the Architectural Association.

Advanced courses for architects will often involve the creation of links between architecture and other subjects. We heard some suggestions yesterday, and may I add a few other examples: *acoustics, building design and construction; daylighting, building design, and town planning; prefabrication and industrialisation of building.*

The first two are concerned with both the internal and external environment of buildings, and the third with techniques and economics.

Post-graduate courses can follow immediately on undergraduate training or be taken after an interval of practice. As a course immediately following undergraduate training there is the objection of the increased length of time of training to which this leads. The remedy may be a reduction of the length of the undergraduate course by raising the entry level.

Many architects I know look unfavourably on specialisation, at least if it implies specialisation in subsequent practice. But the prime object of post-graduate courses is not to create narrow specialists; it is to deepen knowledge and experience. In the medical profession many take post-graduate courses and secure higher qualifications, and then spend their life in general practice. Special knowledge in some field can add to the power of a man in general practice; it does not inhibit him from pursuing it. May I also add that, as in every other profession, architecture needs some specialists.

Research and development

Research is a much mis-used word. It connotes something different from the normal application of established rules and knowledge. It is also to be distinguished from development work. Its object is the advancement of the frontiers of knowledge.

To put it in its simplest terms the theory of a subject is the body of principles that inter-relate and explain facts and phenomena and which within their limits give powers of prediction. Research is the powerful tool for the development of theory.

Research requires training whether for scientists or architects. Research workers have to be trained to think independently and objectively, to develop their critical faculties, to assess and question the validity of existing information and concepts, and equally important, to be capable of self-criticism. They have to learn how and where to trace existing knowledge up to its present frontiers. But research implies more than that. The object of the training is to instil in the student the power of recognising the essentials of a problem, the ability to select and develop the techniques that are appropriate and to see the relevance of apparently unrelated information, and to help fire the imagination which, in poetic language, Wordsworth described as 'clearest insight, amplitude of mind, and reason in her most exalted mood'.

This is the research training. More is required of the developed and independent research worker. He needs the ability to recognise problems, to select those worth attacking, to identify their essential core, to break them down into their parts, and by reassembling the results to build up an understanding of the whole.

We must recognise that in any profession or branch of learning only a minority have the particular aptitudes, or desire, to become research workers.

Allied to research, and the intermediate stage to utilisation, is development. This I might define in a few words as the application of already available knowledge to produce something new or to improve that which already exists. It often, of course, is the direct result and product of research.

I have spoken in general terms. Let me now get closer to the architect.

Research is a favourite catchword. As a mental training it is excellent and the advancement of knowledge is a duty of a profession. But if we are to be realistic we must recognise that more of the field for the architect lies in development rather than in research, though I do not want here to attempt to draw any definite dividing line.

Some problems fall within the discipline of architecture and lend themselves to research by the architect. For example, the use of space and circulation and their relation to needs and design—as is illustrated by the work of Llewelyn Davies and his group on hospitals. Town planning throws up on a larger scale another set of problems. Even on these subjects the architect will often not be able to work alone and may need to call workers in other disciplines to his aid.

Many subjects for architects are what I can call inter-relation problems—i.e. the inter-relation of architecture with social needs, with the physics of the environment of buildings, with materials and structure, with economics. In most of these fields it is with development, rather than research itself, that the architect will be concerned. The architect's place here is not to convert himself into sociologist, scientist, engineer, or economist. It is to learn sufficient of the principles of some branch of one of these disciplines to help bridge the gaps that exist in our artificial divisions of knowledge, to see the relevance of other knowledge to architectural design, and to show how it can be applied. The architect remains an architect, with the increased ability to develop architecture that will come from a wider understanding and knowledge of some related field.

The architect as the planner and the leader of the building team has a responsibility to forward the study of the interaction of other fields of knowledge on his own and of the forces that, willingly or not, must affect his decisions. He must not be content to leave all these bridging operations to those approaching from the other side.

I do not wish here to enter into the difficulties, but I must not entirely burke them for they influence the organisation of architectural research and development. Initial training in research is best obtained by working on an individual problem, rather than a project requiring a group. If it is to be obtained from working in a team on some project then it is important that it should be possible to isolate, and give a man individual responsibility for, some part of it. It is also important that the subject should not be too broad or of such a descriptive nature that it leads to superficiality, and fails to strengthen precision in thinking or the logical development of argument and deduction.

For training in development work I do not think this applies in quite the same way since by its very nature it is likely to involve close co-operation with workers in other fields of knowledge. Thus much investigation or development work on what I have termed inter-relation problems —the bridging operations—requires assistance from other branches of knowledge. For this it will, I think, be evident that the architectural school in a university—with other faculties alongside—or the architect in a sizeable research organisation, has internal facilities for cross-fertilisation and assistance that otherwise have to be established more by external contact.

I think you will need to consider under what conditions time spent on research or development may be counted in lieu of the period of practical experience required for qualification. Here I might draw a parallel with the Institution of Civil Engineers which allows time spent on research under specified conditions at an approved institution to count in lieu of the four years' experience in the design and construction of engineering works that is normally required for associate membership.

Finally, I must refer to the influence that participation in research and development can have on teachers of architecture. In science and in engineering academic work often becomes a career for life. By their original work the staffs of universities become distinguished authorities in particular branches of their subject while remaining in contact with the subject as a whole. The mental satisfaction that is obtained can equal, and for some, surpass that yielded by the normal practice of a profession. Architectural teaching can benefit from the same stimulus.



International Union of Architects: The Moscow Congress

Report by Professor Robert H. Matthew, C.B.E., A.R.S.A. [*F*]

THE FIFTH CONGRESS of the International Union of Architects took place this year in the University at Moscow, from 21 to 26 July. Normally, there is a congress every two years: the three-year gap since the Hague, due to a year's postponement, is unusual. This has put the Statutory Assembly, the business meeting of the Union, out of step, and a separate Assembly was therefore held last year in Paris and will also be held in Lisbon in September 1959. The two meetings will coincide again in London in 1961, and, it is hoped, at two yearly intervals thereafter.

The I.U.A. Congresses seem to snowball, at any rate in size. About 700 at the Hague; this year at Moscow at least 1,500, of which over 1,000 came from outside Russia. National delegations varied enormously in size. France, with 240, was a formidable contingent, and Mexico with 140, surprised and delighted everyone. Great Britain and America brought two of the smallest groups. As no other Commonwealth country has so far joined the Union, English speaking contributions to the discussions, both formal and informal, seemed mainly to come from Scandinavia, China, Japan and Egypt! Unofficial delegates from Australia and Pakistan joined the U.K. group, and we were glad to have them, both for their own sake, and because they will no doubt take home to their respective countries the conviction that I.U.A. is now firmly established, in this age of developing international institutions. The presence of Mr. Dard, representing UNESCO, was especially welcome, as relations between UNESCO and I.U.A. become progressively more important. On all sides, the absence of the Commonwealth was regretted, and it is to be hoped that with the approach of the London Congress this situation may be improved. The President of the R.I.B.A. in his forthcoming tour of Africa, could do much, with his immense prestige, to encourage part of the Commonwealth, at any rate, to pull out of isolation and make its influence felt among the international architectural community. In passing, it should go on the record that, apart from myself and three students, no Scottish architect felt moved to join this great gathering of architects. While Mr. Bellamy represented the English Ministry of Housing and Local Government, the corresponding Scottish Department was unrepresented.

The general theme of the Congress—'The Construction and Reconstruction of Towns'—produced through its documentation and exhibitions, a vast range of material, much more than could readily be digested during the meeting. This has thrown up the problem of how to continue study and discussion after the initial effort of assembling the data has been made. From the point of view of advancement of knowledge, *comparative* study can be of the greatest value: given the initial documentation, a method of follow-up would seem to be necessary. This aspect of the work of the Congress did not escape notice at Moscow, and in the coming year the I.U.A. Executive will consider suggestions already made, for the continuance of the study of the Congress theme by individual countries or, perhaps, by regional groups.

Documentation was done thoroughly; this takes much organisation and particularly time (London Congress Committee, please note!). Four rapporteurs, dividing the globe, were responsible for extracting national contributions, and still more onerous, for producing a comprehensive introductory report, to be summarised from the rostrum.

Arthur Ling undertook this task for Western Europe. His report was generally conceded to be outstanding, and certainly his presentation at the Congress could not have been better—a fact that was widely commented on. For the moment I would merely note that, with the increasing size of meetings, arrangements for *discussion* at the Congress become correspondingly more difficult; at Moscow, attendances at the main congress sessions remained high from beginning to end, but a large part of the day was, inevitably, taken up with statements from the rapporteurs and individual national representatives. There was a wide expression of opinion, that in addition to the main meetings, some method of more informal exchange of views should also be allowed for—not an easy matter to achieve within the time available.

The main exhibition accompanying and illustrating the theme of the Congress was interesting and well presented. The U.K. contribution, taken from London, Harlow and Coventry, assembled with the aid of the Building Centre, was appreciated, both for its content and manner of presentation. This exhibition, bringing together for the first time, a world-wide variety of approaches to town building, will now tour among member countries of the I.U.A., and it is to be hoped that it may be asked for by this country. In view of an increasing interest taken in the I.U.A. permanent exhibitions, the Czechoslovakian delegation offered at Moscow to take full responsibility for organising their circulation. This offer was accepted the more enthusiastically as the Czechoslovakian exhibit itself was quite outstanding in its technique. A small *ad hoc* committee, under the guidance of the Secretary-General, M. Vago, has been set up to deal with requests from individual countries and to arrange the exhibition touring programme.

In addition to the main exhibition, held adjacent to the University (the Congress meeting-place), the Russians staged a vast exhibition relating to Moscow, and a further, intriguing exhibition of students' work; Arthur Ling will comment on the latter in relation to the collateral students congress held in Leningrad the week before the main congress started. The two latter exhibitions illustrated in a striking way the transitional state of architectural thought in the U.S.S.R. at the present time—a post-Stalin evolution that has barely had time to emerge from the offices and find expression on the ground—as all delegates could see for themselves. Moscow is still literally dominated by the post-war phase: literally, because the seven skyscrapers (the Ukraina Hotel, housing most of the delegates, is one) are strategically placed in the old 'Metropolitan Village'. Driving from the airport the flood-lit University, like the cathedrals in York or Ely—is seen from a long distance, deceptive in scale, but undoubtedly impressive. These great monuments have been derided by Western critics—and indeed now mercilessly attacked by Mr. Khrushchev—and in detail they may seem crude and curious to most Western eyes, but as elements in the townscape, I believe that few who have actually seen them would deny their dramatic impact. While these, and the great housing developments of the Stalin



Ivan the Great bell tower, 1660. Members of the Congress in the Kremlin



Professor and Mrs. Robert Matthew at Section 9 (*Photos: John Benson*)

era (representing the vast bulk of recent building) were shown to the delegates of the Congress, no lack of opportunity was also given to see something of those lesser known buildings both preceding and succeeding the monumental 'Middle period'. Professor Kolli (great-great-grandfather, Colley, from Scotland), Hon. Corresponding Member of the R.I.B.A., a most genial and indefatigable host, collaborated, about 1930, with Le Corbusier to build the now historic Trades Union building in Moscow, in the days when architects from abroad contributed to the first architecture of the Revolution. Under his guidance, the few buildings of that period (including the Pravda offices) were visited, and one could appreciate, almost as a museum piece, the beginnings of a movement subsequently cut short before it had got over the first awkwardnesses of its infancy.

So, too, representing the other end of the time-scale, ample opportunity was given to visit the newest developments—the first fruits of post-Stalin thought; in particular, the housing group known as Section No. 9, near Cheremushki, adjacent to the great blocks of flats on the south-west outskirts of the city. (Moscow has little in the way of suburbs: the city is suddenly reached, as through a gateway, the first tenements rising, like some Scottish town out of the surrounding fields.) My only personal contribution to the Congress discussion was a brief plea for human scale in town-building. In reply to this intervention, the Moscow city architect, Lovieko, attempted to justify to some extent the massive scale characteristic of so much housing since the war, on the plea that the Russian people like it 'as they know it belongs to them'. But the reception with which my remark was greeted, by, it seemed, all delegations, indicated very general agreement. Here at Cheremushki is the first evidence of the changing outlook, bringing with it a substantial change of scale. Indeed, as I am not English I can say without undue bias that the influence of English practice seems in this newest of housing sections unmistakeable, as it is also evident in the recently revised planning of the new satellite towns for both Moscow and Leningrad.

Apart from the official towns, no restrictions, as far as I know, were placed on visits or photography. Arriving in Moscow a day before the start of the Congress, I had the opportunity to wander unaccompanied and undisturbed for a whole day round the centre of Moscow, fascinated by the low scale (average two-storey) of the older buildings, many of these in timber, and enthralled by the wonder of the layout and individual buildings of the Kremlin, surely one of the world's noblest city centres. The British Embassy (to which the British delegation was kindly invited to meet Russians and others, by our Ambassador, Sir Patrick Reilly) is not, among the mansions of pre-Revolutionary Moscow, perhaps outstanding; it has, however, a superb and direct panoramic view across the Moscow canal from its island site of one long side of the Kremlin (an architectural consolation no doubt appreciated on occasions by Professor Reilly's nephew). The Kremlin became familiar to most members of the Congress, which opened in the magnificent Grand Palace to the welcoming speech of V. I. Kucherenko, Minister for Reconstruction; it closed with a lively Russian open-air party in its charming gardens, within the massive walls, complete with groaning tables, tents, strings of lights and a military band. That this grand affair ended in a spectacular thunderstorm, which was not part of the arrangements, did not detract from the dramatic effect, perhaps not

wholly appreciated by the ladies, of the downpour—scurrying delegates, large umbrellas, trombonists seeking niches in the walls, and individual ingenuities like Van den Broek poised immovable, but dry, with a garden chair upside down, for half an hour at least, on his head!

In addition, as a member of the Executive, I had the unusual opportunity of visiting one of the Departmental offices, an austere minor palace within a stone's throw of Red Square and Lenin's tomb, to meet Mr. Khrushchev. In accordance with precedent, during the I.U.A. Congress a meeting is sought between the Head of the State or his representative and officers of the I.U.A. At the Hague, the Bureau (the Hon. Officers in R.I.B.A. language) met Prince Bernhard. In Moscow, a similar arrangement was suggested, but Mr. Khrushchev indicated his willingness to meet the 20 members of the Executive. Accompanied by three Russian architects, Abrosimov, Alabian and Lovieko, our extremely gifted and entertaining interpreter, Eugene Sergeev, and introduced by Minister Kucherenko (but unattended by any other officials, guards or assistants), the Executive had an audience on Friday 25 July lasting a full hour and a half. Indeed, if the Executive had not talked itself dry, the occasion would probably have lasted longer, as Mr. Khrushchev seemed to part with us with regret. The meeting turned out to be no formal courtesy call. Mr. Khrushchev, relaxed and cheerful, invited questions, and replied at length, without prompting, but with knowledge and vigour; the discussion, ranging widely from broad principle to details of building costs, constructional methods and even heights of rooms, was interesting and instructive. It will, no doubt, be written into the annals of the I.U.A. Part of the discussion turned on the possibility of foreign architects once again working in Russia; this was followed later by further discussions with Mr. Kucherenko. An announcement has recently been made that a competition will be held for a new housing community in Moscow, in which foreign architects will be invited to take part. This is a major departure from a rigid policy that has now been in force for over 25 years.

My most treasured picture (not very good in quality, I must confess, but clearly identifiable) was taken during this most memorable meeting, held, it may be remembered, at a time of extreme international tension.

Members of the Executive, attending meetings of that Committee in between sessions of the Congress, inevitably missed some of the sights on some occasions (including a maiden voyage on the Moscow-Volga canal); on the other hand, a meeting and dinner was held at the Architects' Home of Rest about 20 miles out of Moscow. Here the Moscow Society of Architects have an estate, mostly farmland with an elegant 18th-century mansion and several smaller, and architecturally most interesting, houses, with three lakes for boating and bathing, in addition to gardens and woodland. This attractive facility is available to architects in many Russian cities; it might, perhaps, be one answer to the future of some of England's historic and unwanted country houses. I must also add, if I appear to complain of too much committee work, that after the Congress, the whole Executive, with as many wives as were present, were taken to the Caucasus and the Black Sea for a week's relaxation, as guests of the Russian Society of Architects, giving a further opportunity for an exchange of views not only of the past Congress, but also on the future organisation and work of the I.U.A. Looking back, it seems unquestionable that, from many viewpoints, the Congress has been a, success. At a time of great international unrest, architects came from all over the world, capitalist, communist and uncommitted alike, to study and discuss, with a minimum of political bias, and with great friendliness, architectural problems of the greatest importance to mankind; they came to learn and make friends; some countries have much to learn, others much to give; for most, a give-and-take may be of equal importance. To many, the greatest value of an international meeting of this kind is the opportunity to meet personally architects from many countries, whose history and background may be different from our own; to hear something of their opinions and outlook, and to see through the medium of the exhibition something of their achievements.

It would seem, in the present state of the world, that this kind of meeting is one of the few bridges across which a flow of understanding may still pass. We shall have, in London, in 1961, an opportunity to strengthen this series of links; we must hope that our friends in the Commonwealth will help us to that end. I, personally, am grateful for the opportunity to have been at Moscow; it was to me, as it was to a very large number of architects, exhilarating.

The main resolution of the Congress, passed unanimously at the final session, is intended to reflect a general conclusion, drawn from the succession of papers and discussion, in relation to the main theme.

This resolution is inevitably, for the most part, in general terms. In some respects, however, it is specific and definite, and in a field where, in some countries architects may be unwilling to speak with conviction, or even unanimity, the outspoken clarity of some points of the statement may be welcome.

Some points from the Resolution*

Architects of all the world assembled in Moscow, at the Fifth Congress of the International Union of Architects, have studied the results achieved in the field of building and reconstructing towns in the last 13 years since the Second World War. . . .

The rapid growth of the urban population, the need to reconstruct towns and to improve the people's living standards, require the architect to approach the problem of building on a town scale. . . .

In this epoch of vast social change and unprecedented progress in science and technology, the development of towns according to plans based on scientific foresight has come to be a vital necessity.

* Translated from the original French text.

National Planning and Master Plans of Towns

. . . The national (building) plans must provide for the siting of industrial and other establishments. . . .

Every effort should be made to limit the growth of cities. . . . Projects of planning and building a community must be preceded by regional planning.

Town Structure

Town planning and development must be based on a long-term master plan . . . which should make provision for the principal elements of the town structure—housing, zones of industry, etc.

Housing

The neighbourhood is the structural unit for the planning and development of dwellings.

Housing density should be expressed by the overall habitable floor space or volume of completed buildings related to site area, and this index should be supplemented by population per hectare.

Transport

All available means should be employed to combat difficulties in town traffic, e.g.

—adequate siting of residential areas and zones of industry.
—convenient interrelation of town and suburban facilities in line with modern technical achievements.
—clear-cut differentiation of the thoroughfare network.
—a decentralisation system of parking spaces for automobiles and provision of streets and squares for pedestrians.

Town Aesthetics

The aesthetic architectural pattern of a town endows it with distinctive features and personality.

Architects must proceed from scales and structural requirements. Rigid planning and standardisation of building elements may easily lead to monotony. Monumentality has a definite place in town development, but the principal aim of housing . . . is the creation of a pleasant environment for the human being.

Legislative Economic and Social Aspects in Town Planning

. . . Local authorities should control the normal development of towns.

In all countries research institutes and academies should be requested to work out the fundamentals of modern town development.

Technical Aspects of Implementing Town Development Projects

. . . Only industrialisation will enable (architects) to derive the greatest benefit from manpower and material resources.

Questions of town development should be handled by specialists under the guidance of a person possessing extensive knowledge and a sense of co-ordination and harmony in space and time.

The architect, by his very essence, possesses all these qualities.

The International Union of Architects asks the support of governments in developing regional planning, town planning, and in strengthening town planning legislation.

But all efforts will be in vain if there is no peaceful co-operation and mutual understanding between the peoples of the whole world. This is the principal requisite of creative development.



The Mayor of Leningrad welcoming the architectural students at a reception in their honour. Left to right: Academician V. Kamensky, Chief Architect of Leningrad; The Mayor of Leningrad; Arthur Ling; I. Fomin, Head of the Architectural Department of the Leningrad Institute of Painting, Sculpture and Architecture; V. Karfik, Dean of the Department of Architecture, Higher Technical School, Bratislava; W. Schutte (Austria)

The Vth International Conference of Architectural Students at Leningrad

THE VTH INTERNATIONAL CONFERENCE of Architectural Students took place in Leningrad on 14–19 July 1958. It was a continuation of the series of post-war international meetings of students held earlier in London, Rome, Paris and Copenhagen. It will be of interest to British architectural students to know that the former British Architectural Students' Association was responsible for the arrangements for the first of these conferences in London.

The Conference was attended by 130 representatives of architectural students' organisations and individual participants from 26 countries: Albania, Austria, Brazil, Bulgaria, China, Cyprus, Czechoslovakia, Denmark, France, German Democratic Republic, German Federal Republic, Great Britain, Greece, Guiana, Hungary, Japan, Korea, Nigeria, Poland, Rumania, Switzerland, United Arab Republic, U.S.A., U.S.S.R., Uruguay, Yugoslavia, and also a representative of the International Union of Students, A. Cieslar and an officer of UNESCO, M. Beak. Among the honorary guests of the Conference were architects: André Gutton, Chief Architect of National Palaces (France); Arthur Ling, Chief Architect of Coventry (England); Vladimir Karfik, Dean of the Department of Architecture and Construction of the Higher Technical School in Bratislava (Czechoslovakia); Wilhelm Schutte (Austria); I. Fomin, Head of the Architectural Department of the Leningrad Institute of Painting, Sculpture and Architecture (U.S.S.R.), M. Kochedamov, Dean of the Department of Architecture of the Leningrad Institute of Painting, Sculpture and Architecture (U.S.S.R.), A. Kaziatko, Director of the Moscow Architectural Institute (U.S.S.R.).

The Conference held discussions on 'The Modern City', 'Architectural Education' and 'International Co-operation of Architectural Students'. These problems were discussed both at the plenary meetings and in discussion committees.

Papers on 'The Modern City' were presented to the Conference by André Gutton, Arthur Ling and Vladimir Karfik. A paper by the Brazilian architect, Oscar Niemeyer, who was unable to be present, was also read at the Conference.

A programme of excursions to buildings, museums, new construction sites, educational establishments and designing studios of Leningrad was also arranged.

On exhibition at the Conference were the works of architectural students of Bulgaria, U.S.S.R., Great Britain, Hungary, Poland, Japan, Rumania, as well as an exhibition of UNESCO. The delegation of Denmark put on display the exhibition material of the IVth International Conference of Architectural Students in Copenhagen.

The Mayor of Leningrad held a reception in honour of the participants of the Conference. They were also received by the Academician of Architecture, V. Kamensky, Chief Architect of Leningrad.

On 19 July the participants of the Conference left on a study tour to Moscow and were present at the opening of the Vth Congress of the International Union of Architects.

The International Union of Architects sponsored the Conference and its Executive Committee took part in its closing meeting. The International Union of Students also gave its support and UNESCO was represented.

On the last day of the Conference a number of resolutions were submitted for approval. The first dealt with the modern city and was in general terms stressing the importance of machine production and transport facilities in town planning, and also the necessity for integrating the plans for modern cities with the development of the national economy as a whole. The second resolution on the problems of architectural education, pointed out that in spite of the varying conditions of life and study in the architectural schools of different countries there was a common aim to educate future planners and architects to meet the physical and artistic needs of people, and considered that a broad exchange of opinions between schools would enrich their creative activities. As well as continuing the international conferences and seminars it was recommended that there should be an exchange of training material in the form of books, publications and exhibitions, as well as by mutual visits of professors and students. There was considerable difference of opinion in the discussions at the Conference on the form of training for the future architect. Some students wished to recommend the adoption of a specialisation in town planning, industrial architecture and architecture for the last two years of the course, but it was decided that there had not been time to discuss the subject thoroughly and no recommendation was made. On the subject of international co-operation between architectural students, the French delegation, which was one of the strongest present, proposed to set up an international union of architectural students, but other participants opposed such a centralised organisation and preferred the more informal arrangements for conferences which enabled student organisations to negotiate and make exchanges extensively on a bilateral basis. It was agreed that the subject should be further discussed by the national organisations so that a solution acceptable to everybody could be found.

The Conference also discussed the place and date of the next Conference and proposals were considered for holding this in 1959 in Switzerland, Hungary, German Federal Republic, Japan, China and the United Arab Republic. After a lengthy debate the Conference finally accepted the invitation of the architectural students of the German Federal Republic to hold the next Conference in Hanover. It was decided not to fix a regular period for the holding of international conferences, but to decide at each conference when the next one should be held.

My impression of the Conference was that all the students who attended benefited considerably from the international con-

tacts they made. The organisation of visits, etc., was excellent, and the portable receiving sets enabled all students to follow the papers and discussions which were translated into four languages. They were also able to see, at the Repin Institute, an interesting exhibition of Leningrad architectural students' work on display which showed a complete break from the classical approach of recent years. In addition there was the standing exhibition of the prize-winning students' work in the Diploma Year which went back to the foundation of the Institute. This gave an opportunity to study the change in students' architectural thought over the last century.

In view of the initiative and great interest shown by British architectural students in international conferences immediately after the end of the war which resulted in the holding of the first conference in London, I felt that the poor attendance by British students was regrettable. Only the Architectural Association was represented (by students Norman Cedar and James Drake).

One of the difficulties of student organisations is the continually changing personnel. This was probably the reason for the disintegration of the former British Architectural Students' Association. Perhaps the new organisation—B.A.S.A., will be able to overcome this difficulty and consider on its agenda in future the need for a more vigorous participation in international conferences of this kind. It would of course be ideal if an architectural students' conference could be arranged in 1961 to correspond with the next I.U.A. Congress.

ARTHUR LING [*F*]

Competition for Designs for Small Houses

A COMPETITION for designs for small houses is announced. This is being promoted by IDEAL HOME magazine in association with the R.I.B.A.

The objects of the competition are:

(i) making architect-designed houses available in the smaller size and lower cost ranges;

(ii) securing increased employment of architects by the public in the long-term;

(iii) creating additional opportunities for some architects immediately.

The competition is open to corporate members of the R.I.B.A. and conditions are available from 'Ideal Home' Architectural Competition, 96 Long Acre, London, W.C.2.

The assessors will be:

Mr. Clifford Culpin, M.T.P.I. [*F*].
Mr. Peter Dunham [*F*].
Mr. Eric Ambrose, B.A.(Arch.) [*F*].

The last day for submission of entries is 12 noon on 30 January 1959.

The Assessors will select 30 designs covering a variety of categories, size ranges and prices. The maximum floor area being 1,100 sq. ft. and the maximum price £4,500.

It is hoped to find good designs in a number of categories including detached, semi-detached (both 'pairs' and asymmetrical); terrace; narrow and wider-frontage design; designs for sloping sites; designs to suit various orientations; timber houses; expandable plans; houses up to 800 sq. ft., from 800–900 sq. ft., 900–1,000 sq. ft., 1,000–1,100 (maximum) sq. ft. The maximum area of 1,100 sq. ft. is exclusive of garage and outbuildings. Designs may in every case be of one floor or more.

The 30 designs chosen will be issued by IDEAL HOME magazine in a special publication and the working drawings will be available for purchase by the public and by private enterprise builders for whom there will be special terms.

In place of the premiums usually awarded to the authors of the winning designs in competitions, fees will be paid to the 30 successful competitors. The fees will be made up of a cash payment of £75 plus a royalty of £10 for each set of prints of working drawings sold.

IDEAL HOME magazine will run a Service Bureau to deal with inquiries and to advise on suitable designs for particular localities.

To encourage the employment of local architects for siting houses, supervision if required, selection of materials and to deal with other matters needing local knowledge and advice, a list of the R.I.B.A. Allied Societies will be incorporated in the publication. There will also be chapters explaining the advantages of employing architects at full scale fees and the advisability of using architects' services for the design of layouts for estates.

It is hoped that members will enter the competition and that the scheme will provide an opportunity of demonstrating to the public the advantages of architect-designed houses.

Arguments for the holding of the Competition in this form

THE R.I.B.A. has for some time been faced with the problem of trying to combat in some way the increasing influence of various publications purporting to supply standard designs for small houses. Many of these designs have been of a very low standard and frequently not prepared by architects.

Faced with this problem the R.I.B.A. decided that the only answer was to produce a similar publication but of a very much higher order: it seemed likely that there would always be a demand for some sort of all-in-service from those who were not prepared or could not afford to employ an architect.

Members of Council also felt that the Institute should take a lead (even if, to a certain extent, it cut across previously held opinions as to how an architect's services should be used) in trying to prevent the continued erection of badly designed houses and badly designed estates.

It was realised that to make any kind of impact on the country such a scheme would have to be launched on a large scale and that as a result both finance and organisation would be beyond the Institute's resources.

The R.I.B.A. therefore endeavoured to obtain financial assistance from a number of bodies whom it thought might be interested in a scheme of this kind. This line of approach met with no success and the Institute came to the conclusion that only one of the larger publishing houses could handle and launch a scheme of this magnitude.

An approach was made to IDEAL HOME through a member of the Institute who acts as Architectural Consultant to this magazine. The proprietors responded very sympathetically to the idea and identified themselves with its object. Accordingly they agreed to join forces with the R.I.B.A. in promoting the competition announced above, and have given it the full backing of their considerable resources.

The launching took place officially at a luncheon held at the Savoy on 22 October, at which Mr. Basil Spence, President R.I.B.A., introduced the scheme to the press.

The Institute is aware that some R.I.B.A. members may feel that the scheme will have the effect of diminishing the opportunities of designing small houses for individual clients but from experience gained over many years the R.I.B.A. considers that on balance those who will use the scheme are not those who would in any case employ architects to design their houses. The Institute has also drawn on the experience of Canadian and Australian architects in whose countries similar schemes have been running for some time. Here the results show that the public have become more architect conscious and the number of architects employed for full services has increased rather than diminished.

The book when published will contain in addition to the prize-winning designs chapters on full services, partial services, names and addresses of Allied Societies, possibly finance.

A far wider distribution of the book (i.e. through booksellers, station bookstalls, etc.) will be achieved through Odhams Press (owners of IDEAL HOME magazine) than would have been possible had the R.I.B.A. launched the scheme independently. The sale of the book will provide a wonderful opportunity for publicising the services of architects amongst a wide public at no cost to the profession.



View of piazza showing Landolina and Archiepiscopal Palaces flanking the cathedral with the church of San Salvatore in the background

Noto—The Perfect Baroque City

by John Jay Ide, Member of the Society of Architectural Historians of the U.S.A.

IF THE VISITOR TO SICILY drives southward from Siracusa towards the coast he reaches after 17 miles a handsome triumphal arch and enters the extraordinary town of Noto, a vision of restrained and harmonious Baroque architecture. This city, now of 30,000 people, was created completely in the 18th century following the destruction of the old town five miles to the north by the great earthquake of 11 January 1693. The earthquake buried a thousand inhabitants in the rubble and 3,000 more perished in an epidemic six months after the catastrophe.

During the nine years which followed, a controversy raged as to whether the old town should be rebuilt or a new one erected in another locality. Among the early proponents of moving to a new site was Don Giovanni Landolina, who drew up a plan for the proposed town but who died in the epidemic, and the Duca di Camastra, the Vicar General of Sicily, who planned the reconstruction of Catania which like Acireale and other neighbouring towns had also been severely damaged. Finally, Cardinal Giudice in 1702 ordered that Noto be moved to the slope of a hill nearer the sea, and this edict was confirmed in 1703 by the Court in Madrid.

The general plan of the new town was due to two engineers, Giovanni Giannoli and Giuseppe Formenti, together with a Jesuit priest—Fra Italia. It was laid out on the hillside in a series of terraces forming the main arteries, these being interconnected by sloping streets. The principal avenue, now the Corso Vittorio Emanuele, opens out into several splendid squares on which are situated the more important churches, palaces, and public buildings. Although the town was largely complete by 1760, building continued into the 19th century, the triumphal arch dating from 1820 and the theatre from 1870. In the 19th century Noto reached its greatest political importance as in 1837 it temporarily displaced Siracusa as capital of the district and became one of the residences of King Ferdinand II.

Two features peculiar to Noto create an indelible impression on the visitor. The first is the beauty of the architecture, a restrained, graceful Baroque having nothing in common with the ponderous flamboyance so often associated with that style. The second is the warm golden colour of the building material, a limestone cut from nearby quarries, which lends distinction to the less inspired structures.

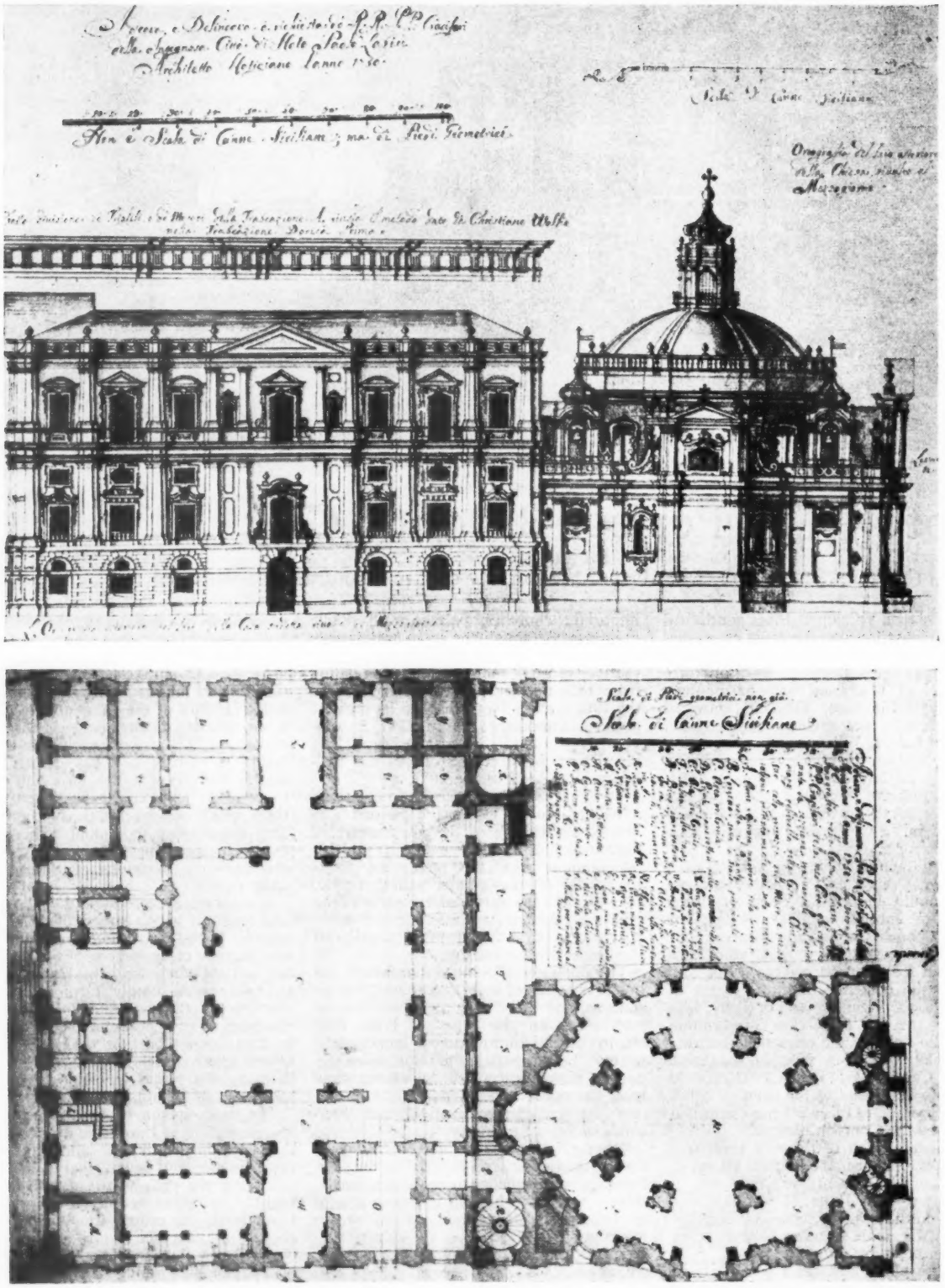
The outskirts of some Italian towns die out in a welter of ugly low houses, filling-stations, and other eyesores. There are no such blots on the edges of Noto, the countryside beginning almost immediately beyond the last palatial building. Even the poorer population dwell in houses that have the appearance of palaces; in some cases the walls are screens with the upper windows open to the sky.

The total effect of absolute harmony is rivalled in the writer's experience only by Pienza, a much smaller town. There, nearly three centuries earlier, an imposing group of buildings was created by Bernardo Rosselino for Pope Pius II within four years, but much of the original Corsignano remained.

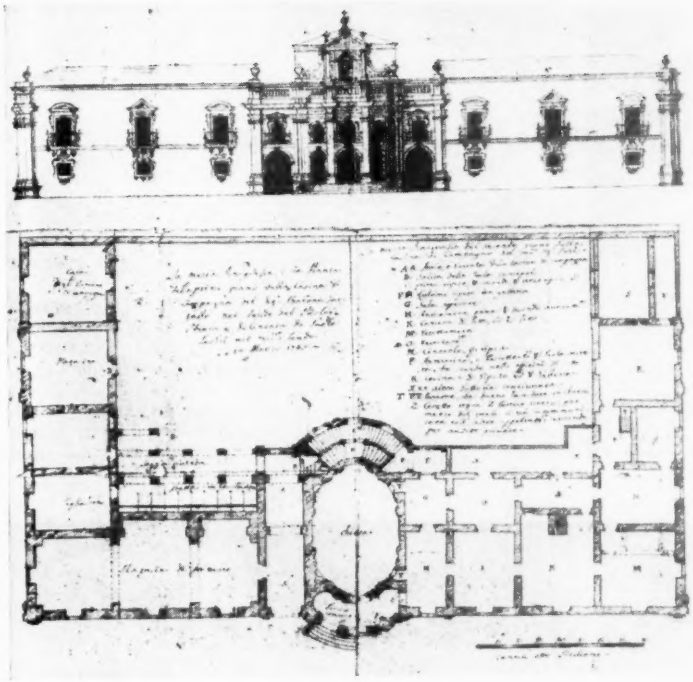
How was it possible for the inhabitants of a town who had lost most of their possessions in a disaster to rebuild it within half a century on such a magnificent scale? This was accomplished by reason of the great wealth and determination of the Church and the remaining resources of the noble families of the community. An even more amazing circumstance is that there existed at this precise period in Noto's history a number of local architects and master builders with the taste and ability to conceive and realise the superb structures which we see today. Not only are they outstanding individual achievements but as a group they establish a mood of extraordinary harmony without being dully repetitive.

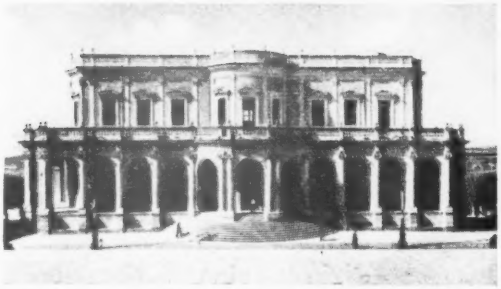
It is infinitely regrettable that the names and accounts of the careers of these architects lie buried in the archives of the town and that the creators even of the cathedral are not definitely known. However, due to information kindly furnished by the Director of the Communal Library and the officials of the Municipio, I am able to cast some light on the identities of several architects who should certainly take their rightful places in history as worthy successors of Vignola and Bernini.

The main square of Noto, one of the most beautiful in Europe, is dominated by the imposing cathedral approached by three immensely broad flights of steps extending the full width of the façade. Eight Corinthian columns adorn the lower level; the central four are repeated above but over the centre columns are placed statues of the four apostles. The twin campanili forming an integral part of the cathedral front greatly add to the majestic effect.



Church and Monastery of P.P. Crociferi, Noto, designs by P. Labisi, 1750. The church was demolished in 1924, but the monastery remains and is used as a school



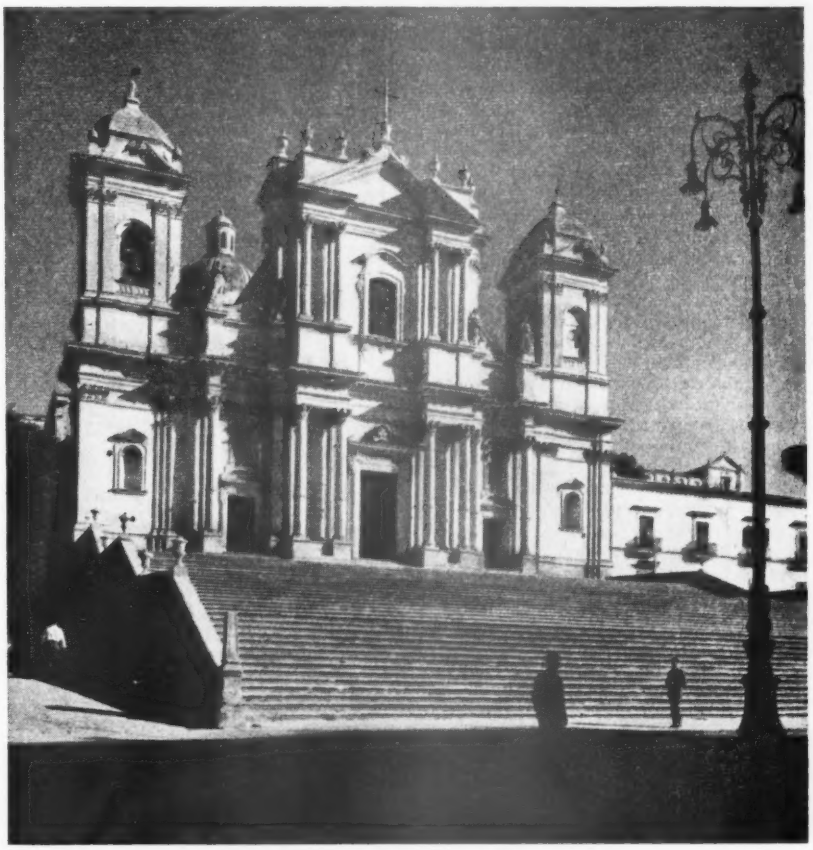


Palazzo Ducezio with superb loggia, built in 1746. The upper floor was added in 1937. It is now the City Hall



Palazzo Landolina adjoining the cathedral (*Photo: J. J. Ide*)

Above: Elevation and plan of Villa Gargallo at Priolo near Siracusa, designed by P. Labisi, 1765. Chapel in the centre. Left half of plan: ground floor; right half: upper floor
Right: The cathedral, by an unknown architect. Begun about 1720 and not completed until 1770
(*Photo: Edwin Smith*)

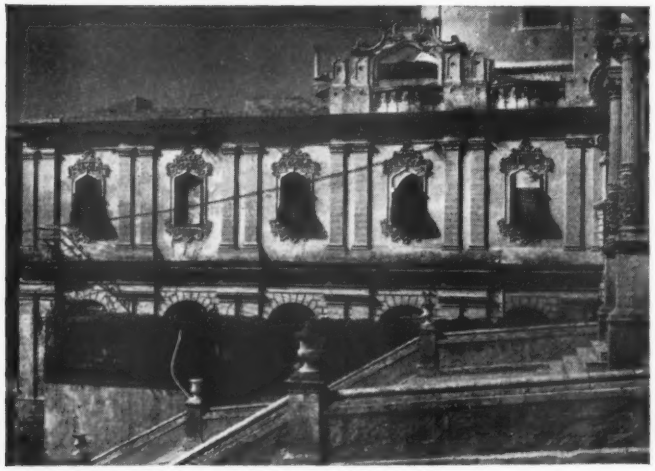


Although begun early in the 18th century the cathedral was not completed until 1770. The original architect is unknown but the master builder Vincenzo Sinatra is credited with much of the work executed after 1740.

The Duomo is flanked by two fine Baroque buildings, the Archiepiscopal Palace on the right and the Palazzo Landolina, owned by the Marchese Sant' Alfaro, to the left. In front of these palaces are great horseshoes of flat-topped trees repeated on the other side of the square.

Directly opposite the cathedral is the Palazzo Ducezio, now the City Hall, distinguished by a superbly proportioned loggia of which the three central arches form an elliptical projection. The front of the building originally consisted of only one floor, the rear, due to the sloping terrain, being two stories in height. Unfortunately, only 20 years ago an upper floor was added and this, although in harmony with the loggia, has changed the exquisite proportions of the original structure.

The loggia surrounds three sides of the building and its corners instead of being angular have charming re-entrant curves. The graceful Ionic columns and piers, the capitals of which are enriched by swags, and the delicate mouldings surrounding



(*Photos: Edwin Smith*)

Below: Church of the Immacolata, built in 1745

the arches give a light touch of rococo gaiety to the classic structure.

The architect of the Palazzo Ducezio, which dates from 1746, was Paolo Labisi, a gifted pupil of Francesco Sortino noted for his monumental church of the Collegio with its triple tiers of Doric, Ionic, and Corinthian columns framing the concave front. Labisi was also responsible for the Church and Monastery of the P.P. Crociferi, the design of which is reproduced (on page 12) from the Noto archives. The church designed in 1750 was demolished in 1924 but the monastery building now serving as a school still exists. Another Labisi drawing also reproduced is from the archives of Marchese Gargallo in Siracusa and shows the Villa Gargallo at Priolo designed in 1765.

At the north end of the square is the severely simple façade of the Church of San Salvatore which was not begun until 1791, the architect (also a talented painter and sculptor) being Antonio Mazza. An unusual feature is the rectangular screen 23 ft. wide placed over the arched main entrance through which light filters into the richly decorated oval interior. The adjoining monastery covering over 100,000 sq. ft. was erected after 1705 from the design of Antonio Di Mauro. The extraordinary tower has a fanciful curved triple bay face with a series of rounded openings filled by bowed iron grilles.

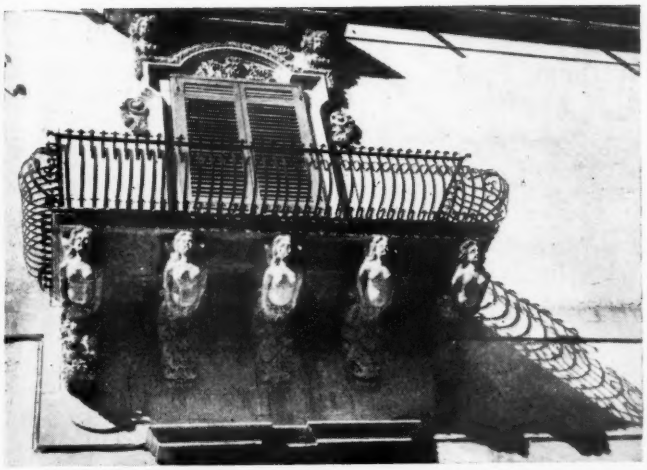
Across the street from the monastery is the Church of the Immacolata built in 1745 and reached from the Corso by a triple flight of steps. Its pedimented façade includes two tiers of Corinthian pilasters and an arched doorway flanked by niches.

Apart from the cathedral, the most impressive church in Noto is that of San Domenico which overlooks a small garden opening off the Corso. This was the earliest church to be built in the new city and was completed by 1727. The front with its two tiers of freestanding Doric and Ionic columns has a boldly convex form which heightens the effect of shadow. Happily, the numerous niches remain unfilled as the façade is perhaps already over-rich.

Rosario Gagliardi, the architect of San Domenico, also designed such churches in Noto as Santa Chiara, a rococo jewel with an oval interior, the Carmine with its charming concave façade, the cathedral of the neighbouring town of Ragusa and other spendid examples of Sicilian 'settecento' architecture. And yet in common with his colleagues he has been completely ignored by art historians and is not even listed in such an all-inclusive reference book as Thieme-Becker!

Noto has a number of noble palaces such as the Frigintini, San Giacomo, Modica, and Astuto, most of them on the street above and parallel with the Corso. The most remarkable is the huge Palazzo Villadorata in the narrow, sloping street to the left of the cathedral. The simple main entrance is framed between Ionic





1760, the work then being continued by his successor Prince Lorenzo Villadorata. The architect Paolo Labisi employed here the typical pilaster treatment at the corners, the thin cornice, the rich window designs and wide fenestration which he later used in the Villa Gargallo. Labisi was assisted by the master builder Vincenzo Sinatra and the remarkable sculptors Mulè, Mauceri, and Randazzo. Altogether, the Palazzo Villadorata is one of the most imaginative essays in Southern Baroque architecture in Europe.

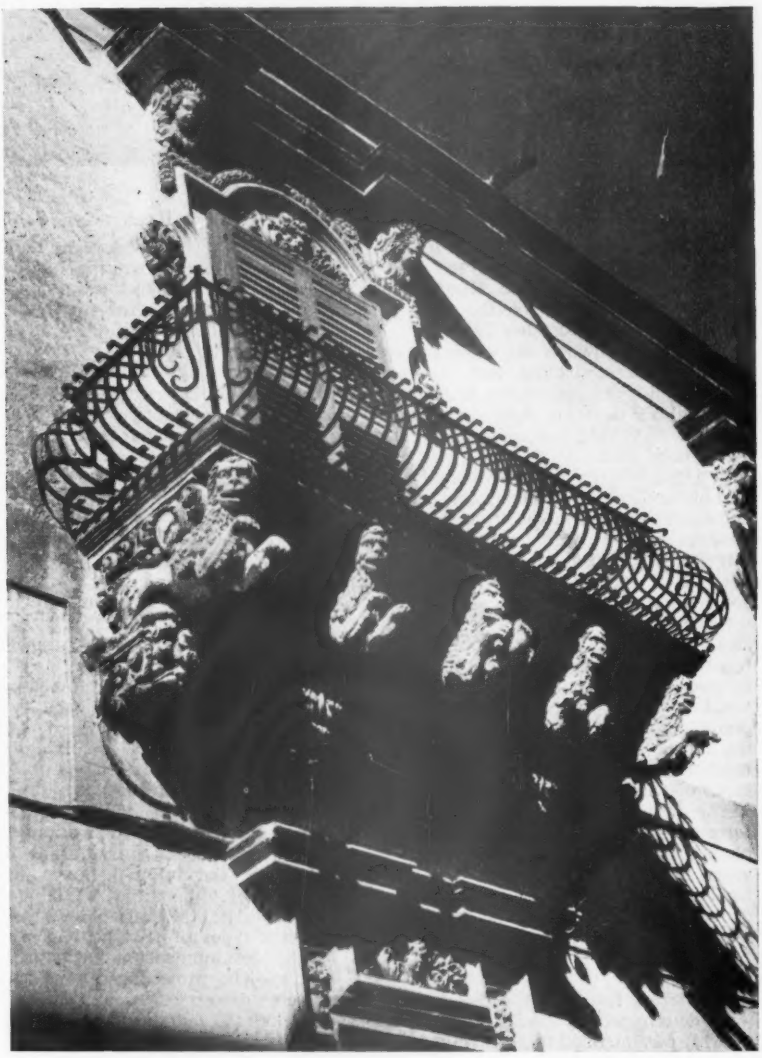
In closing this sketch of a marvellous architectural accomplishment we may quote the appreciation by Douglas Sladen:

'Noto is one of the most beautifully built towns in Europe and this remote little place comes out in the memory like Würzburg or Nymphenburg as one of the finest achievements of the age which produced Mozart and Tiepolo.'

(*Photos: Edwin Smith*)



Palazzo Villadorata, begun in 1737, with details of two of its balconies showing the elaborately carved corbels



columns supporting a classic although richly decorated entablature. Also, the ground floor windows are fairly conservative. However, the second floor balconies with their bulging iron grilles are supported by the most outrageously fantastic corbels possible to imagine. Each group of five brackets is composed of different figures including nymphs, Moors, Chinamen, cherubim, and lions. The great windows above are crowned by carved arcs and broken cornices supported by female heads. Happily, the architect knew when to call a halt to richness and the cornice of the building is very light and devoid of carving.

The palace was begun by Don Giacomo Nicolaci in 1737 and he supervised its protracted construction until his death in

Cooper Taber Factory

Seed Processing Building and Warehouse, Witham, Essex

Architects: Chamberlin, Powell & Bon
Peter Chamberlin [A]
Geoffry Powell [A]
Christof Bon, Dipl ETH Zürich

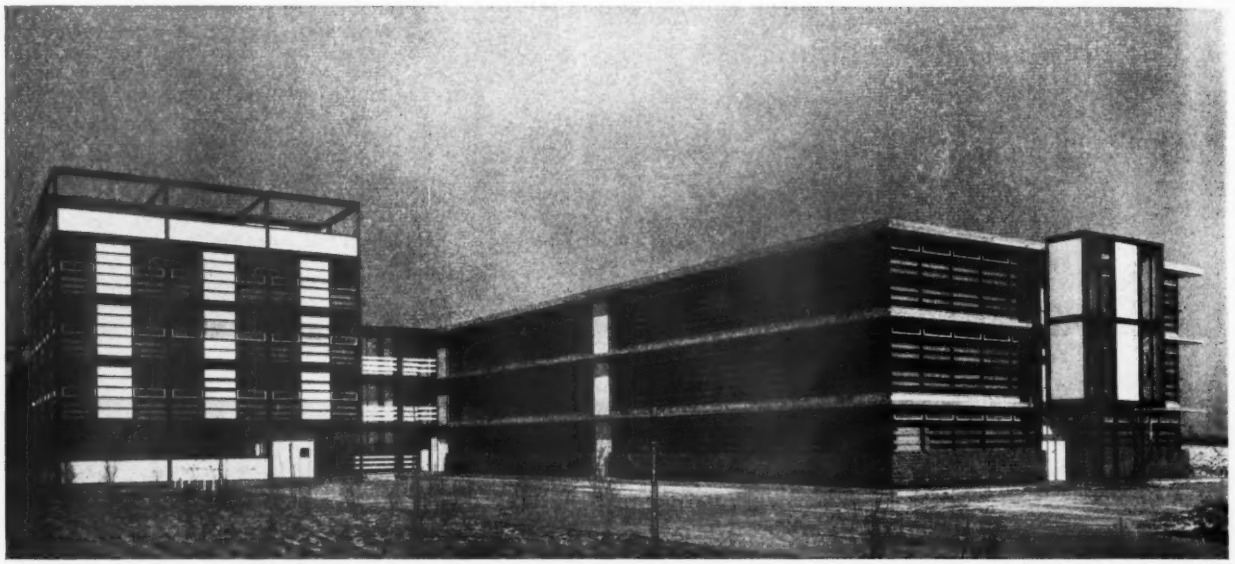


Photo: Architecture and Building

View from south. L–R: Processing Building, bridge, Warehouse

THIS BUILDING was awarded the R.I.B.A. Architecture Bronze Medal in the area of the Essex, Cambridge and Hertfordshire Society of Architects for the three-year period ended 31 December 1957.

The building owners are wholesale seed merchants who, having lost their old premises in a fire, required a factory with about 30,000 sq. ft. of floor space for the purpose of drying, cleaning and storing agricultural seed.

The site was open land which formed part of the Company's seed testing grounds and access was obtainable from the public road in the south-west corner of the site. The roads running along the west and north boundaries belong to British Railways and are private; the site is level.

Since the active processes of drying and cleaning are quite different from the static function of storing, the factory was planned in two separate buildings: a processing building to contain the drying plant, cleaning machines, laboratory for testing the fertility of seeds, and office accommodation; and a warehouse for storing the sacks of seed.

The buildings are grouped round the forecourt; trees and shrubs have been planted on the west side to complete the visual enclosure of this space. The layout has been planned to allow for the addition of another warehouse on the east of, and identical to, the one already built.

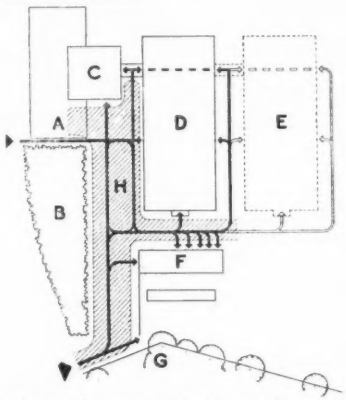
Design

The different forms of the two buildings were determined by their different functions. It was intended that a certain tension should be created between the active character of the processing building and the static character of the warehouse. The relationship between the two buildings is stressed by the proportions and detailing of the cladding.

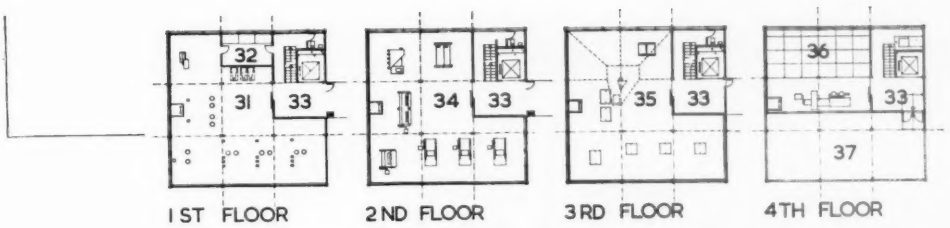
The processing building is a cubic steel cage (45 ft. by 45 ft. on plan by 45 ft. high), sitting on a blue brick plinth containing processing equipment and the various elements providing for vertical circulation. The floors are in the form of timber platforms resting on the steel framework, so designed as to be easily adaptable to any changes required for new machinery or ducting at a future date.

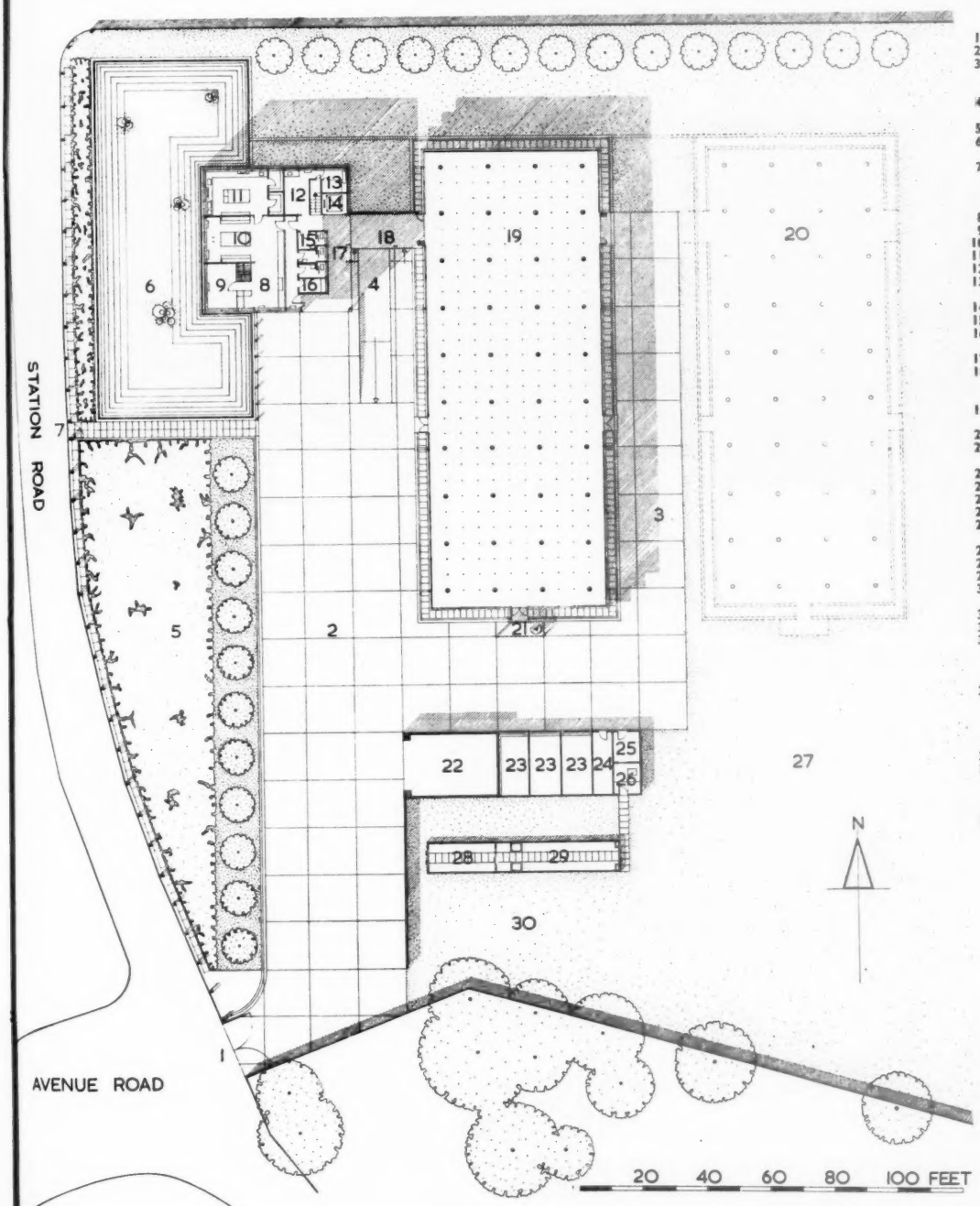
The warehouse consists of three superimposed concrete platforms, rectangular and identical to each other on plan, having no irregularities or interruptions within the unbroken floor surfaces.

The warehouse is of reinforced concrete flat slab construction designed in accordance with British Standard Code of Practice No. 114 (1948). Columns are set out at 15 ft. centres; the floor to floor height is 9 ft. The floors are designed to carry a load of 224 lb. per square foot. Non-actinic glass is used to admit daylight while excluding solar heat. The need to sub-divide the internal floor area into sections of different size (in order to accommodate the variable quantities of different types of seed held in store) led to the development of easily adjustable fencing. The projecting canopies serve to prevent an outbreak of fire spreading from one floor to another and also provide external access to the ventilators when these may not be accessible from inside where the sacks are stored against the perimeter fence. There are no services in the warehouse apart from electric lighting; no heating was required but good cross ventilation was essential which is provided by the pivoting opening lights arranged immediately under the soffites of the floor slabs.



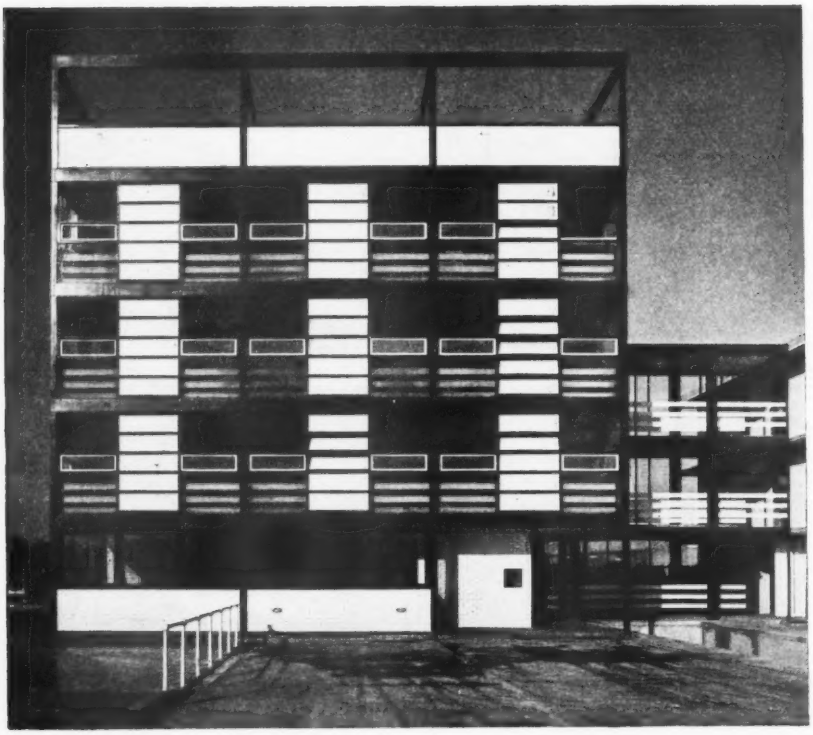
Circulation diagram: 1. Black line indicates how access is obtained to the Processing Building C, to the Warehouse D, and to the Garages F; paved road can be extended to serve a future warehouse E
2. The area hatched diagonally indicates how the buildings C, D and F, the planting B, and the neighbouring property G, group round the forecourt H, thus visually enclosing it except where this space opens out over the pool A, and between the Warehouse D and the Garages F





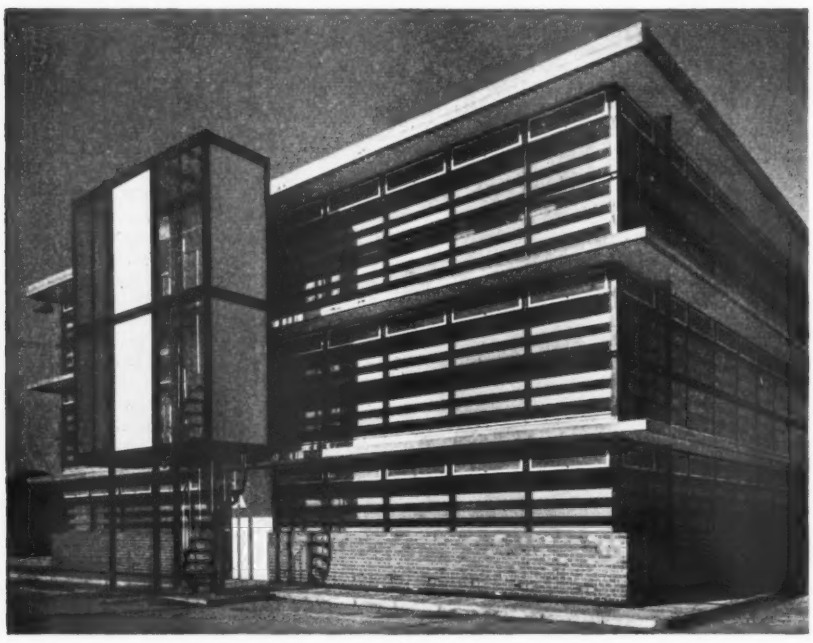
GENERAL LAYOUT

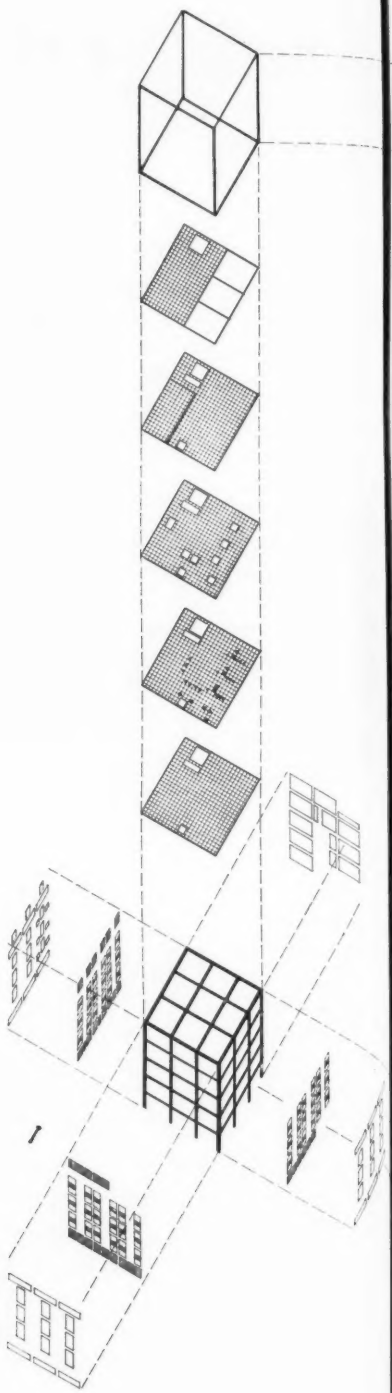
1 Main entrance gates
2 Concrete forecourt
3 Concrete service road giving access to east side of Warehouse
4 Sunken loading bay with ramp up to forecourt
5 Shrubbery
6 100,000-gallon static water tank
7 Gate providing direct access with old premises remaining on other side of Station Road
8 General office
9 Manager's office
10 Shop
11 Laboratories
12 Staff rest room
13 Electrical intake and lift motor room
14 Lift
15 Lavatories
16 Warehouse foreman's office
17 Covered loading bay
18 Covered link connecting Processing Building with Warehouse
19 Warehouse; each floor 8,000 ft. super
20 Future Warehouse
21 Enclosed hoist and spiral staircase
22 Garage for two lorries
23 Garage for car
24 Store
25 Fuel store
26 Boiler room for greenhouse heating
27 Seed proving grounds
28 Unheated greenhouse
29 Heated greenhouse
30 Screened yard for horticultural use
31 Take-off and bagging floor
32 Pea-picking room
33 Lift and staircase landing; bridge linking with Warehouse at first and second floor levels
34 Machine floor; machines are fed via hoppers from above and discharge via chutes to the take-off floor below
35 Hopper floor
36 Gas heated drying floor; dried seed is discharged via chutes to the hopper floor below
37 Open air drying floor



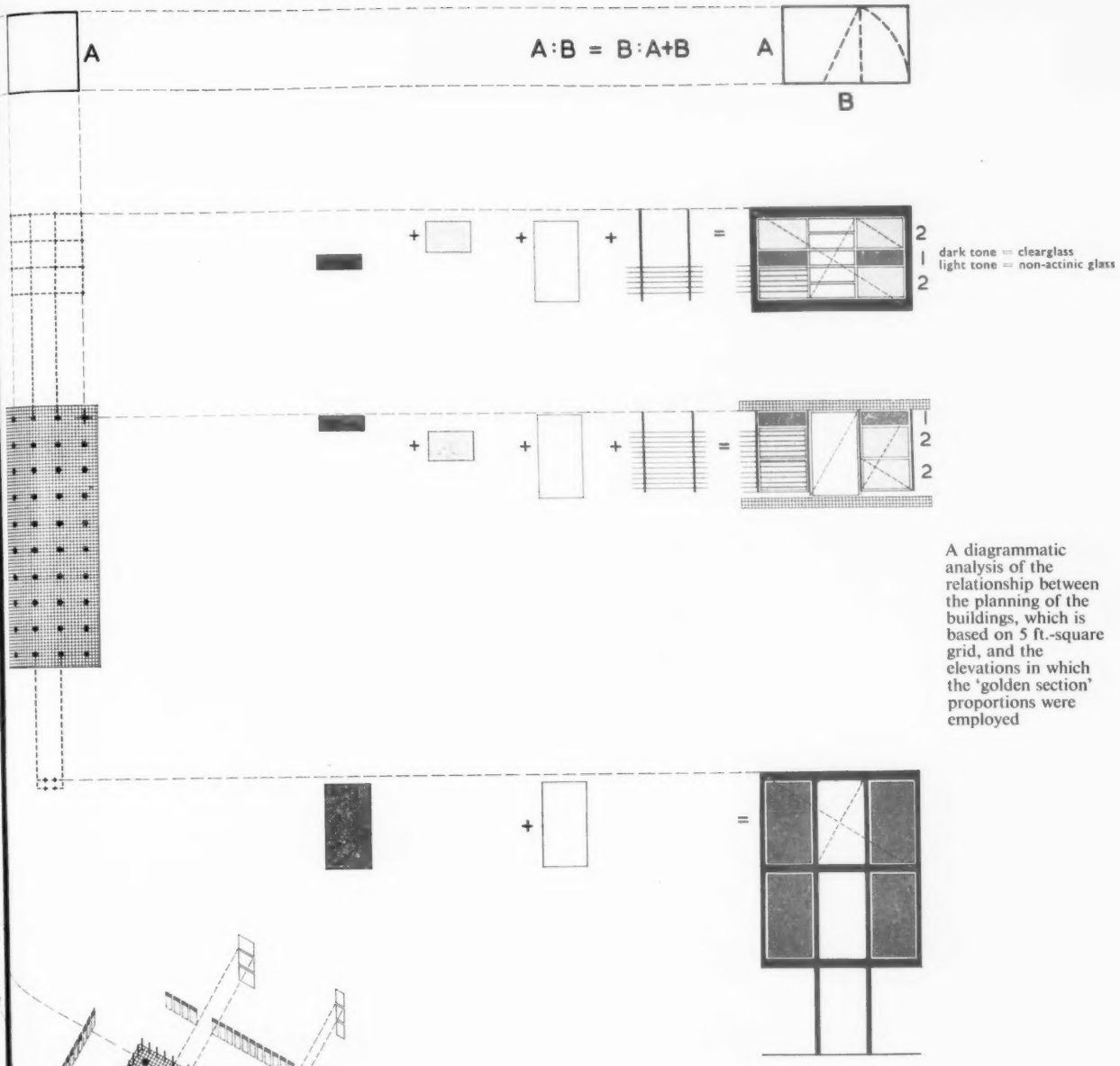
The Processing Building, south elevation, with pool on left and bridge connecting with Warehouse on right

Below: South end of the Warehouse; engineering brick base; cantilevered reinforced concrete floor slabs; steel mullions painted red, blue-green non-actinic glass, white painted guard-rails internally. Steel frame of hoist enclosure painted red, steel chequer plate painted white, clear sheet glass.

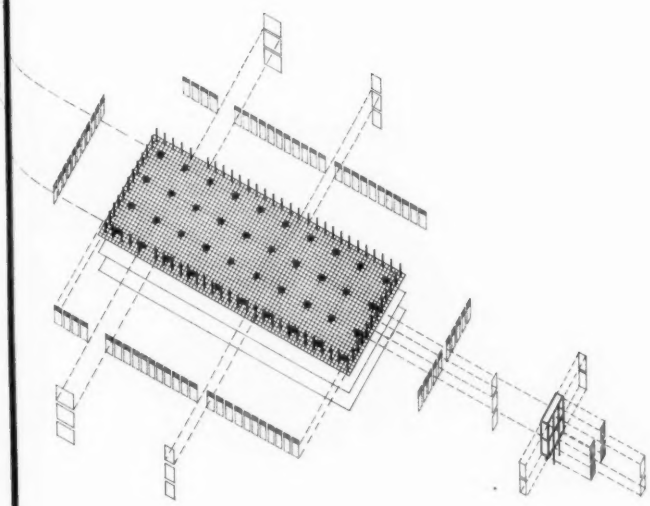




Photos: Architecture and Building



A diagrammatic analysis of the relationship between the planning of the buildings, which is based on 5 ft.-square grid, and the elevations in which the 'golden section' proportions were employed



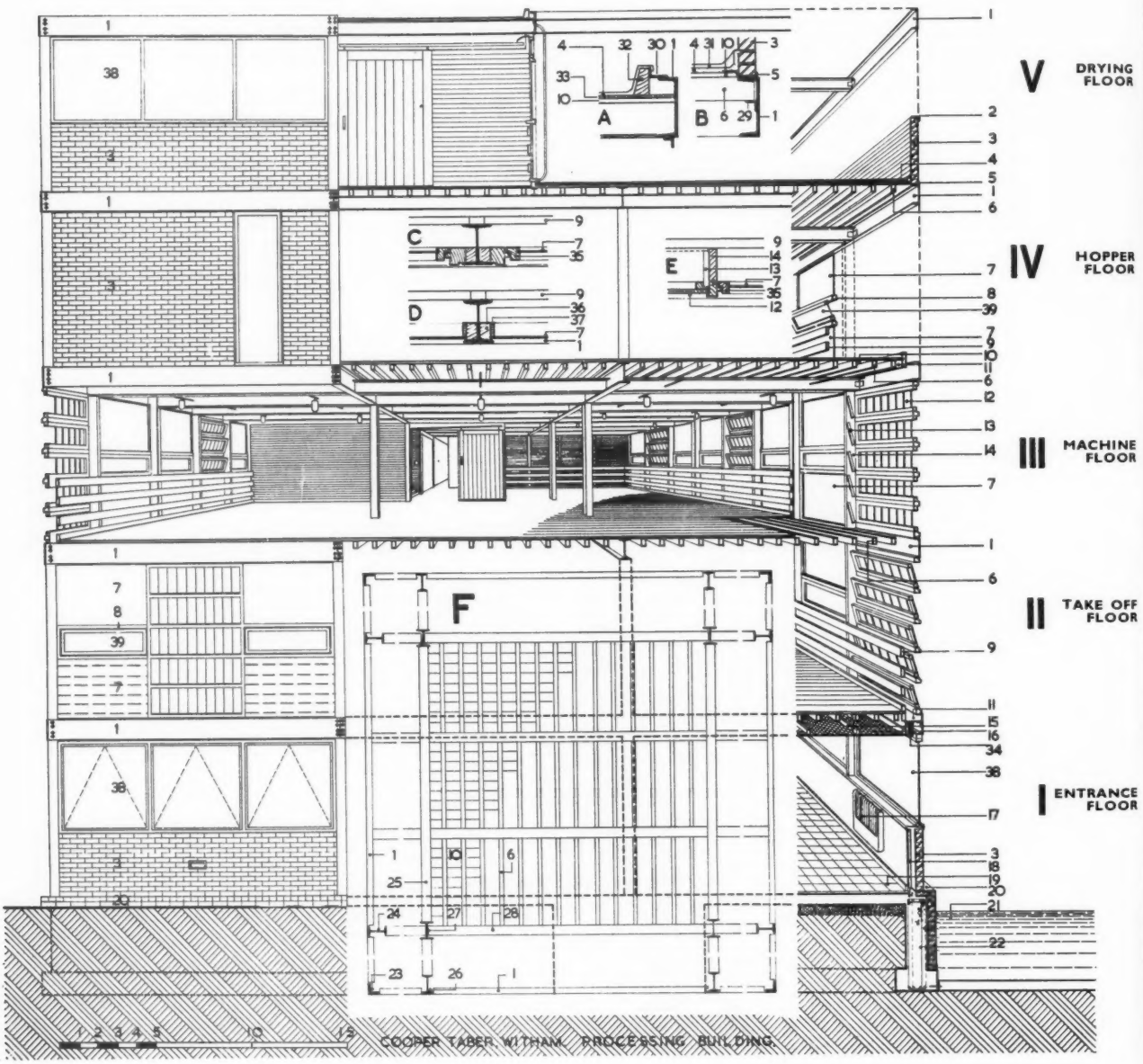
Structure: The steel frame of the Processing Building, although exposed, is protected from corrosion by being shot blasted and zinc sprayed before painting. The interior is protected from the weather with panels of glazed brick, glass or timber. The stanchions are set out at 15-ft. centres; the floors were designed to carry a load of 200 lb. per square foot.

Assistant Architects: J. R. Holroyd, J. Connaughton [*A*]. Quantity Surveyors: Messrs. Davis, Belfield and Everest

KEY: PROCESSING BUILDING

1 12 in. by 3½ in. rolled steel channel shot blasted zinc sprayed, painted red
2 5 in. by 3 in. rolled steel angle capping shot blasted, zinc sprayed, painted red
3 4½ in. thick white glazed brick wall
4 ¾ in. asphalte
5 Galvanised pressed metal channel bolted to rolled steel channel on mastic bed
6 4½ in. by 3 in. softwood joist
7 'Calorex' non-actinic glass
8 Hardwood frame painted dark blue
9 6 in. by 2 in. softwood guard rail
10 1½ in. thick tongued and grooved softwood floor boarding
11 10 in. by 2 in. softwood skirting
12 Framed and battened hopper ventilators painted white
13 Hardwood stops to ventilators
14 Mullions formed of 9 in. by 2 in. softwood
15 3 in. by 2 in. softwood ceiling bearers suspended from floor above
16 Plaster on expanded metal ceiling
17 'Sapphire' balanced flue gas heater
18 2 in. thick wood wool panels plastered internally
19 9 in. by 9 in. blue rubber floor tiles
20 Blue engineering brick plinth
21 Static water tank
22 Reinforced concrete perimeter foundation beam, distributing load from perimeter stanchions
23 6 in. by 6 in. rolled steel angle
24 10 in. by 6 in. rolled steel stanchion
25 12 in. by 6 in. rolled steel joist
26 10 in. by 6 in. rolled steel stanchion
27 8 in. by 6 in. rolled steel stanchion
28 8 in. by 6 in. rolled steel joist
29 2 in. by 2 in. rolled steel angle
30 4 in. by 2 in. rolled steel angle
31 Sand and cement screed reinforced with chicken wire
32 6 in. by 5 in. softwood curb
33 ½ in. fibre insulation board
34 Venetian blind
35 Hardwood outer frame tongued to softwood mullion
36 3 in. by 2½ in. softwood batten bolted through stanchion web
37 Hardwood glazing bead
38 ¼ in. plate glass
39 32 oz. sheet glass

A Detail at edge of upper roof
B Detail at edge of open air drying floor
C Detail on plan showing junction between clear glazed lights and main stanchions
D Detail on plan showing junction between fixed 'Calorex' glazing and main stanchions
E Detail on plan showing hopper ventilator, timber mullions and clear glazed light
F Typical plan showing ceiling details of the centre bay of the building



KEY: WAREHOUSE

1 Reinforced concrete roof slab
2 ½ in. insulation board
3 ¼ in asphalte
4 Cast iron rainwater outlet discharging into black vitreous enamelled steel rainwater pipe
5 Soffite of roof slab finished with white emulsion paint as far as anti-capillary groove; upstanding edge left unpainted
6 Centre pivoted opening light; softwood frame painted white; 32 oz. clear sheet glass
7 Softwood outer frame of opening light, painted dark blue
8 6 in. by 2 in. softwood guard rails bolted to 4 in. by 1¾ in. rolled steel mullions
9 'Calorex' ¼ in. thick roughcast non-actinic glass, fixed with beads
10 Steel T-transome and 1½ in. diameter steel tube handrail fixed on brackets to mullions
11 Pressed steel 'hit and miss' ventilator, incorporating groove to hold bottom edge of glass
12 5 in. by 1 in. softwood cill
13 Top and front edge of projecting r.c. canopies left untreated
14 Slate cill; back edge rebated to receive glass
15 9 in. blue engineering brick wall
16 Half-round C.I. channel gutter with removable cover
17 Precast concrete paving slabs
18 Precast concrete curb
19 Gutter, laid to fall, connecting with static water tank
20 Concrete foundation to 9 in. wall
21 Blinding concrete
22 Asphalte floor finish
23 Screw threaded floor sockets fixed to concrete floor set out at 5 ft. centre to centre flush with asphalte finish, to receive screw threaded bottom end of removable 2 in. diameter scaffold tubes to which fence boards are fixed. Whole of each floor may be divided up at 5 ft. intervals in either direction to form storage bays as required. Removable fencing is designed to interlock with fixed perimeter fencing





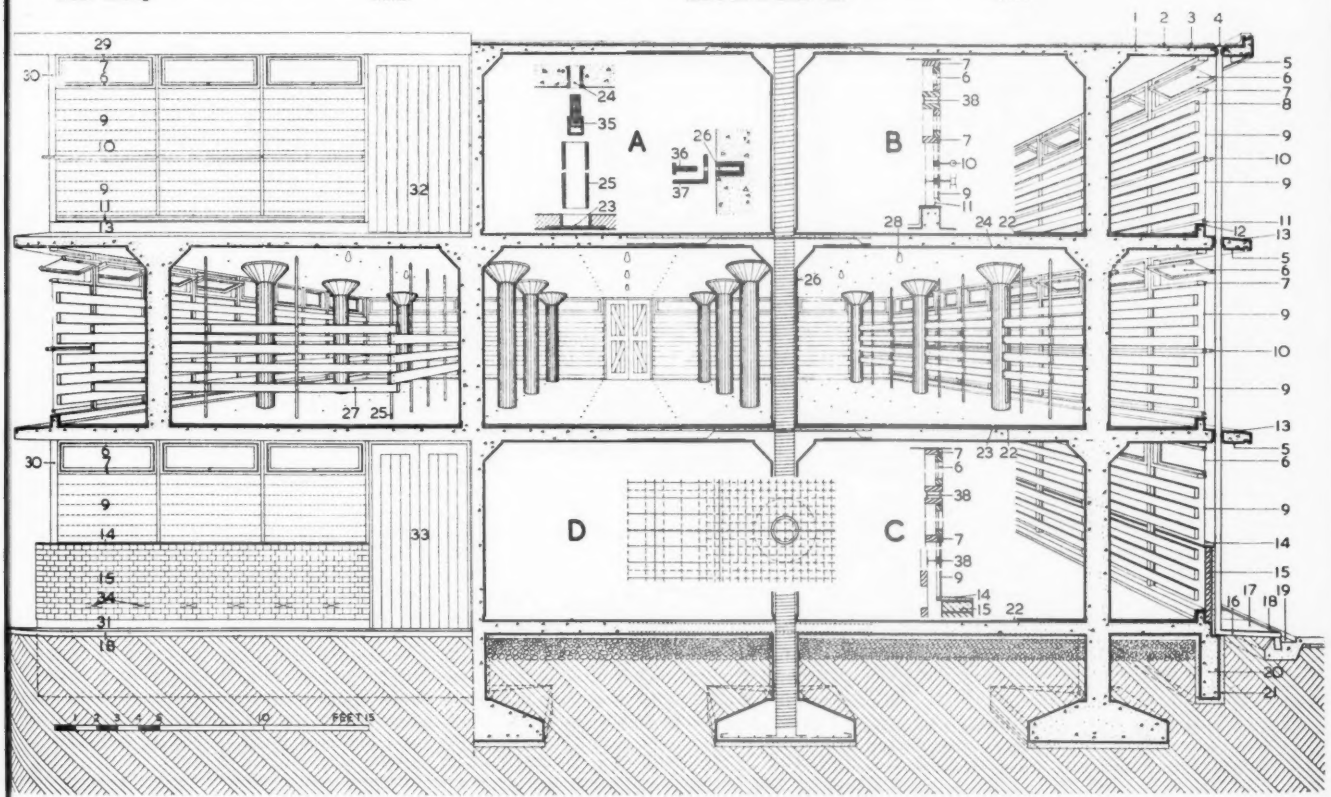
Photos: Architectural Review

Processing Building: interior on take-off floor; structural steel framework painted red; sheet metal chutes, green; soffite and joists, white

Warehouse interior: on right: white-painted guard rails on inside of steel mullions; white painted fairface ceiling; asphalte floor finish

24 Screw threaded socket cast in concrete floor, set out at 5 ft. centre to centre flush with soffite, to receive screwed extension piece which holds top end of scaffold tubes in position
25 2 in. diameter steel tube, painted dark blue, drilled to receive bolts for fixing fence boards
26 Screw threaded socket cast in concrete columns (12 to each column) to which steel angles may be bolted for securing ends of removable fence boards
27 6 in. by 2 in. fence boards, painted white
28 Electric light fittings
29 Fair-face concrete, left as from shuttering
30 4 in. by 4 in. rolled steel angle mullion, painted red
31 Concrete plinth painted black
32 Framed, ledged, braced and battened sliding softwood doors, painted white
33 Pair of framed, ledged, braced and battened softwood doors, painted white
34 Hit and miss galvanised iron ventilators set in brick wall
35 Extension piece for screwing into ceiling socket to locate tubular standards
36 Hexagon head bolt
37 2 in. by 1½ in. steel angle, drilled for fixing removable fence boards
38 4 in. by 1¾ in. rolled steel mullion, painted red

A Details of removable fencing
B Details of cladding, typical floor
C Details of cladding, ground floor
D Typical reinforcement plan at column head



R.I.C.S. Report on the Cost of Flats and Houses in England and Wales

THE CONCLUSIONS and recommendations on the cost of flats and houses in England and Wales from the report of the R.I.C.S. Cost Research Panel, submitted to the Minister of Housing and Local Government in June 1958, are reprinted here at the request of the R.I.B.A. Cost Research Committee.

In substance the committee warmly supports these conclusions and brings them to the attention of members because architects more than anyone have a decisive part to play in putting them into effect.

Among the aspects of the problem dealt with are certain issues going beyond the Cost Research Panel's terms of reference, beyond the flat and house problem, and which are significant for the way in which architecture—and architects—are developing.

The notes that follow the conclusions have been added in an attempt to set the house and flat cost problem in its proper context and to promote discussion among members.

R.I.C.S. Cost Research Panel: Conclusions and Recommendations

We have examined the relative cost of flats and houses and we are satisfied that, although it is to be expected that flats will be more expensive, there is ample scope for reduction in the cost of flats.

Our principal recommendation for reducing the cost of high density development is that cost should be a planned factor and should be closely watched from the inception of the scheme to its completion.

Budget Limits. We consider that a realistic cost approach by local authorities is essential if costs are to be reduced.

We therefore recommend that local authorities should give their architects, as part of the initial brief, a clear and unambiguous cost limit, as a budget total, within which to design the scheme.

Ceiling Prices. There may be a danger of conflict between budget totals and ceiling prices set by the Ministry of Housing and Local Government. The Ministry should provide consultative facilities for local authorities desiring assistance in setting their architects a limit of cost.

We therefore recommend that local authorities should invariably arrange for early consultation between the Ministry, their own officials and advisers preparing multi-storey housing schemes.

Pre-Contract Planning. Failure to allow adequate time for preparation and investigation is a major cause of high building costs.

We therefore recommend that local authorities should arrange their building programmes so that adequate time is allowed for proper investigation and consideration of all aspects of design.

Cost Information. It is important for the architect to have access to cost information during all stages of the design.

We therefore recommend that the quantity surveyor should be appointed in time to co-operate during the initial stages of the scheme.

Cost Planning. Money can be saved by:

(*a*) the exploitation of economies possible in correct site development and in the design of multi-storey housing; and

(*b*) a balanced distribution of cost in the selection of the correct material or method of construction for the implementation of the design.

We therefore recommend that the architect and the quantity surveyor, in collaboration with other consultants, should adopt some system of cost planning during the working out of the design.

Nomination of Specialist Sub-Contractors. We are concerned at the high proportion of work for which specialist sub-contractors are nominated and the effect which this has on costs.

We therefore recommend that the nomination of specialists be reduced to a minimum. Where nomination cannot be avoided, we recommend that quotations be carefully cfiecked and contrasted for cost efficiency against alternative methods, before acceptance.

Bills of Quantities. If practical economies are planned by special methods of construction, the use of unusual materials, or through extensive repetition of structural components, fittings and finishings, it is essential that these are properly described in the bills of quantities.

We therefore recommend that quantity surveyors should ensure that the descriptions of all items in the bills of quantities are in every way adequate to provide a clear basis for pricing.

Building Cost Research. We find that there are a number of problems related to multi-storey housing costs—many of which apply equally to other types of building development—which require further investigation.

We therefore recommend that consideration should be given to the promotion and financing of necessary research projects and the extension and co-ordination of research in the many aspects of building at present being undertaken by a number of organisations and individuals.

Notes

Why have 'costs' come to the fore so much in the last two or three years? Is the question a passing fashion, or has it deeper roots?

The expense of building work—as the accounts of some historic buildings show—has always been of concern, yet the need to develop cost planning, to raise a whole new subject of 'building economics', has only been felt in the post-war years.

The 'cost problem' is not an isolated question of how to keep prices down, it is part of the whole change apparent in the remarkable advances in lighting, acoustics, heating, structural engineering, and more recently in organisational efficiency among a few contractors. In short, it is the latest phase in the profound revolution begun by the pioneer functionalists of the 1920's.

Functionalism may have begun as a re-appraisal of planning aims, but it implied something much more extensive —the application of scientific ingenuity where rule of thumb and handcraft were used before. It is a truism to say that architecture has ceased to be an affair of prominent civic structures for wealthy clients and has become part of the daily economic life of the country. Yet to those engaged in building, the change in the role of architecture—and of architects—is not easily apparent. Among the proliferation of new methods and new ideas, it is often difficult to decide which developments are permanent and which are passing. Indeed, modern architecture itself in the 1930's was regarded as a passing 'fad' by the majority of the profession, just as today, tall flats are regarded by many as an expensive fancy promoted by architects from purely aesthetic motives.

It is curious that what appear at first sight to be purely aesthetic motives are later seen to express, perhaps unconsciously, the economic and technical forces at work. Thus the impulse to build high originated among architects before local authorities were compelled to acknowledge the scarcity and expense of land and before building contractors and manufacturers got to grips with the possibilities of repetitive multi-storey construction. Can we even see in the architects' impulse an anticipation of the change in people's attitude to urban living? An attitude curiously in accord with the economic pressure towards higher densities. The R.I.C.S. in their report remarked on the absence of a tradition of flat building in this country as one of the less tangible reasons for the high cost of flats. It may be that development of more economic methods of designing and building flats has more to do than we realise with people's acceptance of flats as homes.

The need for cost planning is not such a new idea as it might seem. In former times the stability of structures was a matter for rule of thumb decisions deriving from a kind of experience intuition—knowledge that in the last few generations has been overhauled and reinforced by the development of mathematical analysis and testing. The expertise of cost control, hitherto also in the rule of thumb category, seems to be embarking on essentially the same kind of transformation. Just as the early engineers were beset with inadequacies of workmanship and variations in quality of material, those who are extending the frontiers of cost knowledge are beset with variables in pricing beyond their control.

But, difficulties of detail apart, the transformation has been the same, in structures and in services as well as in costs. By using analytical techniques and knowledge a more precise relationship between ends and means is possible. Indeed the contrast between the spare, diagrammatic style of buildings of today and the bulky opulence of former times is a consequence of the same process.

Manufacturing and contracting industries which serve architecture have undergone the same kind of change, hence the ever increasing specialisation of technique and the sore problem of the nomination of specialist sub-contractors. Clearly if the building industry is to continue to respond

to scientific knowledge, specialisation is likely to grow rather than diminish. And the need for an architect to consult closely and effectively with specialists at the design stage will become even more necessary. Where scientific knowledge is applied it seems to bring about, sooner or later, complexity, precision of specification and often, the economic discipline of quantity production. To exploit a specialist technique to the full, an architect must take account of these characteristics—particularly the last. British Standards and Modular Co-ordination are attempts to do so on a collective, national scale; nomination of sub-contractors is an attempt to do so individually. The direct specifying that suffices for traditional techniques—brickwork and carpentry—would hardly make for efficient design or buildings, if used for proprietary flooring, roof structure or heating systems, unless accompanied by close and effective consultation with the specialists.

The truth is that while approaches to design and methods of construction for large buildings have changed almost out of recognition, the procedures and documents by which we organise the process have remained substantially the same. It is rather as if we were trying to control modern traffic by methods used for horse-drawn vehicles in the 1880's. There are numerous signs of the strain—protracted final account settlement and the growth of the 'all-in service', as well as the paradoxical situation where nominated sub-contractors may be doing more than half the building, but the form of contract refers to them in only one or two clauses.

These notes are an attempt to step back from problems of detail in house and flat costs and to see the context in which they occur. The solution to cost problems lies ultimately, not in the hands of committees or research organisations, but in the hands of the professions.

To stimulate this interest and to carry further the frontiers of cost knowledge and experience, the Cost Research Committee have arranged the first of what is hoped will be a series of courses on the role of costs in architecture. Details of speakers and their subjects were given in the October issue of the JOURNAL.

Reprints of the full R.I.C.S. Report on the Cost of Flats and Houses in England and Wales are available, price 1s. (post free), from the R.I.C.S., 12 Great George Street, Parliament Square, S.W.1.

Research into Domestic Housing

THE THIRTEENTH REPORT of the Nuffield Foundation gives the following information on a grant being made this year for research into domestic housing:

'Little advanced research into architectural problems has been done in Britain. Architectural practice has gone beyond the principles taught in the school; nevertheless, the progress made in recent years in the architect's approach to planning and design and in the techniques and organisation of building has been disappointingly slow. The practical value of organised investigation into problems of function and design of special kinds of buildings has been shown in the past few years by the work on schools, first promoted by the Ministry of Education, and that on hospitals, sponsored by the Nuffield Provincial Hospitals Trust. Indeed, apart from the work of these two special groups aided by the Building Research Station, very little serious architectural research is being done in this country. The Nuffield Foundation believes that it is now urgently necessary for universities to take up such studies.

'The University of Edinburgh, which has an architectural honours degree course, now intends to create a postgraduate department of architecture under Professor R. H. Matthew, C.B.E., A.R.S.A. [*F*], and it is hoped that it will play an important part in the development of teaching and practice. The department will be the first of its kind in the country. The first subject of research will be domestic housing.

'In recent years little research into housing has been done by any university department of architecture in this country. The opportunities of doing work of practical value are immense, for though millions of houses have been built since the war to make up the shortages, we are moving into the age in which millions more will have to be built to replace the obsolescent houses built in the great urban development of the 19th century. During the past 25 years there has been little significant advance in the technique of planning individual dwellings or of grouping dwellings in relation to one another. The active housing agencies, however enlightened, are so heavily committed to the day-to-day problems of production that they have little opportunity for objective study and analysis. The Building Research Station, having completed some years of study on the problems of educational buildings, is now about to apply its efforts to the many-sided scientific problems of housing. Professor Matthew's project will attack the problem from the architectural side.

'Two 'live' experiments in the planning of individual dwellings in their grouping are to be undertaken by Professor Matthew. The department will be concerned with a rural group of 50–75 low-density houses to be built by the East Lothian County Council, and a high-density housing group comprising a larger number of dwellings to be built by the New Town Corporation of Cumbernauld. The two projects are complementary and will be carried out in parallel so that comparisons may be made. The work has the support of the Department of Health for Scotland, which is responsible for housing.

'The first year's study will be devoted mainly to the assembling of basic data. During the second year preliminary work will be done on both projects. The third and fourth years will see the development of the projects in the field; and the fifth year will be devoted to the assembly, evaluation, and publication of the results. The research team will consist of a group of workers under the guidance of a senior research architect and will include a sociologist and a quantity surveyor. The team will be helped by other departments in the university. A third of the total cost of the project, which will be over £60,000, will be borne by the university. The Foundation has offered a grant of £30,000 over five years on the assumption that the remainder will be provided by the Department of Scientific and Industrial Research and the Carnegie Trust for the Universities of Scotland.'

Practice Notes

Edited by Charles Woodward [*A*]

MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Development Plan Procedure. Circular 51/58 dated 10 September refers to development plans and proposals for alterations or additions to a development plan involving an inquiry. Local planning authorities are reminded of the importance of giving publicity to their proposals and of being ready to explain them to those concerned. An objection may be withdrawn if an objector is giving an explanation of the intentions of a plan proposal and the reasons for making it. The Ministry will send to the local planning authority a list of the modifications and the reasons for proposing them.

The authority will be invited to publish the proposed modifications and the reasons, and this can be done by specifying the modifications in the published notice if they are few and easily described. In most cases it will be necessary to state where the list can be inspected. Where the modifications cannot be shown clearly in words the authority will be invited to prepare a map and place that on deposit. The published notice should state that objections should be sent to the Secretary, Ministry of Housing and Local Government, Whitehall, S.W.1, or in Wales and Monmouthshire to the Welsh Secretary, Ministry of Housing and Local Government, Cathays Park, Cardiff.

Where objections are lodged and not withdrawn the decision whether to hold an inquiry will be taken on the circumstances of each case. Where an objection is not pressed because of an undertaking by the authority that they will ask the Minister to modify the plan to meet the objection, the Minister may feel unable to comply with the request. The objection and the authority are then notified, and unless the objector has already developed his objection, either at the local inquiry on the plan or in connection with a planning appeal or a compulsory purchase order relating to the particular case, the objector is afforded an opportunity of stating it fully before a final decision on the proposed modification is taken.

The Inspector's report (or reports) should be made available to those interested when the decision on the plan is announced. The Minister considers that the most convenient way of making the report available will be to place it on deposit at the same time and place as the approved plan. Copies of the report will also be available for inspection at the Ministry's Offices in London or Cardiff as the case may be.

Town and Country Planning General Development (Amendment) Order, 1958 (S.I. 1958, No. 1460). Circular 53/58 refers to this Order which came into operation on 8 September. Its effect is to grant permission to the National Coal Board for prospecting for coal to be worked opencast. It replaces the previous procedure whereby prospecting was authorised by the Minister of Power. The development cannot be begun until after the expiration of 42 days from the date of service in writing on the local planning authority indicating the nature, extent and probable duration of the prospecting. Class XX of the Development Order, 1950, is amended accordingly.

MINISTRY OF LABOUR AND NATIONAL SERVICE

The Chief Inspector of Factories Report for 1957 has now been published and is obtainable at H.M.S.O., price 5*s*. The Report deals with factory accidents, Appendix VI showing some of the main causes of accidents in building operations during the six years 1952–57. From this table in the Appendix it emerges that falls, particularly falls of persons, are as might be expected the main cause of accidents in the building industry and that different classes of accidents have widely varying severity risks. Among falls, demolition, although not responsible for a large total number of accidents, does produce a high proportion of fatal accidents—7·55 per cent of falls during demolition work were fatal in 1957, in comparison with a figure of 1·9 per cent for all falls. Work in excavation stands out as being the most hazardous of the other classes mentioned in the table, 5·6 per cent of the accidents due to the fall or collapse of sides of excavations were fatal, while the percentage of fatalities for all building accidents was 1·07 per cent. The Report refers to the development of new scaffolding which it is hoped may help to reduce such accidents. Reference is also made to the increased use of prestressed concrete, which produces special accident prevention problems.

The Report states that it is particularly satisfactory to record a substantial fall of over 16 per cent in the fatal accidents in the building industry from 186 in 1956 to 156 in 1957. Particular attention has been paid recently to the need for more effective accident prevention measures in this industry and the figures suggest that these efforts are beginning to show results. The total number of reported accidents in the building industry, however, remains constant at about 14,000 per annum, and the Report emphasises the need for the industry to continue its efforts to improve on the present serious position.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY

Regrading of Districts. The National Joint Council have authorised regrading of Districts in the Midlands Region, the North Western Region and the Southern Counties Region from A1 to A, to take effect as from 6 October 1958. This will result in an addition to the hourly rate of craftsmen and labourers and in current contracts under the R.I.B.A. Contract there will thus be a net addition to the Contract Sum as from 6 October.

DEPARTMENT OF HEALTH FOR SCOTLAND

Advice to Planning Authorities on the Siting of Petrol Stations. Local planning authorities are given an indication of the factors which seem relevant to the Secretary of State for Scotland in dealing with applications for planning permission for petrol filling stations in a circular issued by the Department of Health for Scotland (Friday, 19 September). The observations contained in the circular relate particularly to applications for stations in the open country where traffic moves relatively fast and where there are few pedestrians.

The circular draws attention to the two main factors specially relevant to petrol filling station applications—namely, the effect of access to them on traffic flow and road safety and the weight to be given to arguments based on the public need for the facilities proposed. The purpose of trunk roads is to carry traffic speedily and safely between important centres, and petrol stations, even on well placed and adequate-sized sites, which would have access to fast open stretches of road are liable to interfere with the smooth flow of traffic. The circular accordingly indicates that they should not be allowed unless there is a very good reason, and suggests that by-passes and new constructions providing fast stretches should, if less than twelve miles long in all, normally be kept free of stations. These objections to petrol stations on trunk roads will often apply to stations on other roads.

The circular also suggests that the fringe of a built-up area may be the place where petrol stations serving through traffic will prove least open to objection provided there is land for a well-designed layout.

In a final paragraph the circular makes reference to the question of how far need should be taken into account in considering an application for a petrol station. To set up a control based entirely on considerations of need under which applications might be rejected on the ground that the district was well served with stations even where there was no amenity, traffic or other planning objection would, says the circular, in the Secretary of State's view go beyond the proper scope of planning control.

The circular, D.H.S. No. 83/1958, is published by the Stationery Office, price 3*d*.

LAW CASES

Survey of premises for a prospective purchaser. Structural Survey. Breach of Contract. In a recent case in the High Court it was held on the evidence that an architect was requested by an intending purchaser of premises to make a structural survey of the house and its outbuildings and to test and survey all services and equipment. The architect gave a favourable report on those matters on the strength of which the purchaser completed the purchase of the property. Defects in the property were afterwards discovered and the owner, as he then was, brought an action against the architect for breach of contract.

His Lordship held that the architect was under a contractual obligation to his client to report such structural defects or deficiencies in the services as a competent and careful architect would normally draw to the attention of his client, and that, with the exception of the drains, he had failed to carry out those obligations.

On the measure of damages his Lordship decided that he must ascertain what were the defects in the property to which a careful and competent architect would have drawn the attention of his client. Then he must assess the reasonable costs of remedying those defects at the date of the purchase in 1952 and finally must ascertain the difference between the market value of the property in good structural repair and the value which it would have had if it had been known that it suffered from the structural defects which ought to have been reported. The difference between those two values provided the measure of the damages which the plaintiff was entitled to recover together with a sum for compensation for physical discomfort and inconvenience. In assessing the amount of damages due to the plaintiff his Lordship allowed interest on that amount at the rate of five per cent per annum from 1 October 1952, the date of the purchase of the property. (THE ESTATES GAZETTE, 16 August 1958.)

The Holiday Fellowship Ltd. v. Hereford. Repairing covenant in a lease. Whether windows are part of main walls. In this case tried in the Chancery Division on 18 July, a declaration was asked for by the lessees that the lessor was liable under the lease of a house to keep in good repair and condition, including all necessary painting, the window and window frames of the premises.

The lessees' covenant in the lease provided that they would maintain and keep the demised buildings and the said fixtures and fittings therein (except the roofs and main walls of the said dwelling-house and outbuildings and water supply) with hedges, ditches, gates . . . in good repair and condition.

The lessor's covenant in the lease provided that he would keep the main walls, roofs and outbuildings of the demised premises in good repair and condition.

For the lessees it was submitted that windows formed part of the walls of the premises and therefore came within the terms of the lessor's covenant to repair.

For the lessor it was submitted that when one talked about a wall one meant a wall and not a window. The ordinary meaning of the word 'wall' was to be applied in

construing the covenant and the liability fell upon the lessees to keep the window and window frames in good repair and condition.

In giving judgment for the lessor his Lordship said that, in his opinion, main walls were those walls which supported the structure of the building or had something to do with its stability. It seemed clear enough that the wooden window sashes and the glass held by them had no bearing on the stability of the building. If they were all removed the building would be standing just as it was before. It must be agreed that it would not be a dwelling-house any longer; in a dwelling-house it was a *sine qua non* that the windows should be glazed. His Lordship could not think that on any fair view of the words the frames and glass of the windows formed part of the main walls of the house. If there were stone mullions some different consideration might arise, but he did not see any such consideration here.

His Lordship declared that the lessor was not liable to keep in good repair and condition the windows or window frames of the premises and the lessor would have the costs of the action. (THE ESTATES GAZETTE, 23 August 1958.)

ARBITRATION

Setting aside an Award. The Arbitration Act, 1950, provides that 'where an arbitrator or umpire has misconducted himself or the proceedings, or an arbitration or award has been improperly procured, the High Court may set the award aside'.

The Agricultural Holdings Act, 1948, provides that 'where the arbitrator has misconducted himself or an arbitration or award has been improperly procured the County Court may set the award aside'.

In a recent case under the Act of 1948 an arbitrator made an award in respect of the rent of a farm. The award was made in consequence of an application by the 'landlord' for the arbitrator to determine what rent should be payable by the tenant in respect of the farm. The tenant appealed to the County Court to set aside the award on the ground that the person who made the application was not in law the landlord because his wife was the legal owner of the farm. The application should have been made by her and therefore the arbitrator's award was void. The County Court judge dismissed the appeal and the tenant appealed to the Court of Appeal.

The Court of Appeal dismissed the tenant's appeal on the ground that in the circumstances of the case it had no jurisdiction to deal with the matter, and neither had the County Court judge. The Court of Appeal considered that an arbitration or award had not been 'improperly procured' in this case in the sense of fraud, bribery, corruption and the like. The 'landlord' was merely putting himself forward as the landlord. That conduct on his part could not amount to an improper procuring of an arbitration. It was merely as if a stranger to the relationship of landlord and tenant had given a notice to the tenant, in which case the notice and all subsequent proceedings would be a complete nullity. It was clear that in those circumstances there was nothing, no arbitration proceedings and no award, on which the power to set aside an award could operate. (THE ESTATES GAZETTE, 6 September 1958.)

[*Note.* It was pointed out in the judgments that the power to set aside an award is a statutory power under the Arbitration Act, 1950, and that there is also the inherent jurisdiction of the Court to set aside an award for an error of law on its face.]

Review of Construction and Materials

British Standards Institution—Kite-mark

A new presentation has been adopted for the Kite-mark, B.S.I.'s well-known certification trade mark, which B.S.I. 'lease' to manufacturers for use as an independent assurance that goods bearing it are, in a literal sense 'up to (British) Standard'.



It is to make this fact quite clear, and thereby to enhance the significance of the Kite-mark to both makers and their customers, that the new design (illustrated here) adds to the mark itself the explanatory wording 'Approved to British Standard'. B.S.I.'s Mark Committee which carries overall responsibility for the administration of the mark scheme, is anxious that the new form should be introduced by present licensees as soon as possible. The Kite-mark scheme offers a valuable service to architects in that it guarantees that B.S.I. have taken steps to inspect or test the product to ensure that it is up to the standard. It thus provides an architect with *prima facie* evidence of performance of the contract without himself having to inspect, sample or test the goods.

Two pamphlets are available which will be of use to architects: Manufacturers licensed to use the Certification Mark of Institution: List 'A' Industrial Goods; List 'B' Consumer Goods. These are available from British Standards Institution, British Standards House, 2 Park Street, London, W.1, price 2*s*. each.

The Modular Society Ltd.

Two events have made this a memorable year for the society. The publication of 'The Modular Society Reports Results' in the MODULAR QUARTERLY must have impressed many with the amount of investigatory work which is being undertaken by a relatively small society. The report contains a concise statement of the aims and rules of modular co-ordination as the society sees them and is well worth studying.

The other event is the erection of the 'Modular Assembly' on the Albert Embankment. This is a purely experimental venture the object of which is to examine the use in assembly of a variety of building components that are manufactured to sizes that are related to 4 in. multiples, and particularly to examine the different tolerances required in erection.



Such experiments are worth-while, this one is very simple and the errors far from being hidden are there for all to learn from. In fact the building tells the whole story of Modular Co-ordination. As Mr. Peter Trench said recently, it is time that the society received more support from architects, manufacturers and contractors.

Detailed information is available from the Secretary, Modular Society, 22 Buckingham Street, London, W.C.2.

British Standards recently published

B.S. 146: 1958. **Portland blastfurnace-cement.** Price 7*s*. 6*d*.

Prepared by Committee CEB/1, the R.I.B.A. representatives were F. H. Heaven [*A*], and H. V. Lobb [*F*].

B.S. 1281: 1958. **Glazed ceramic tiles for internal walls and fireplaces.** Price 4*s*. 6*d*.

Prepared by Committee CLB/2, the R.I.B.A. representative was F. H. Heaven [*A*].

B.S. 2782: 1958. **Methods of testing plastics —Part 4. Analytical methods and viscosity in solution.** Price 6*s*.

B.S. 2989: 1958. **Continuously hot-dipped galvanised plain steel sheet and coil.** Price 3*s*. 6*d*.

B.S. 2994: 1958. **Cold rolled steel sections.** Price 8*s*. 6*d*.

B.S. 2997: 1958. **Aluminium rain-water goods.** Price 8*s*. 6*d*.

Prepared by Committee HIB/20, the R.I.B.A. representatives were A. H. Ley [*F*] and O. C. F. Carey [*A*].

B.S. 3012: 1958. **Low density polythene sheet.** Price 3*s*.

Prepared by Committee PLC/9, the R.I.B.A. representative was A. P. Cooksey [*A*].

B.S. 1333: 1958. **Acid resisting silicon iron pipes and pipe fittings.** Price 6*s*.

Prepared by Committee CHE/21, the R.I.B.A. representative was F. H. Heaven [*A*].

Specifications for Hardwood Joinery

AT THE REQUEST of the English Joinery Manufacturers' Association a joint meeting was held last year between representatives of the E.J.M.A. and the Industry Liaison Sub-Committee of the Science Committee. This meeting was reported in the November issue of the JOURNAL for 1957. As a result E.J.M.A. undertook to prepare a note on hardwoods and their use, as an aid to architects preparing specifications. This note was considered at further meetings, and is published below. The English Joinery Manufacturers' Association, Sackville House, 40 Piccadilly, London, W.1, have kindly offered to make reprints available to any member wishing to have a file copy.

* * *

The English Joinery Manufacturers' Association requests architects in all cases where hardwood joinery is specified to indicate definitely and quite clearly the species intended. The English Joinery Manufacturers' Association therefore arranged to meet the Science Committee of the Royal Institute of British Architects and as a result of these meetings the following memorandum on joinery hardwoods was drawn up by the English Joinery Manufacturers' Association as a brief guide to architects in preparing specifications in such a form that manufacturers may more accurately assess their requirements.

It is desirable that in all specifications, bills of quantities and tenders where hardwood joinery is specified, the species intended should be indicated quite clearly and the botanical name given as well as the common standard name, so that there is no chance of confusion.

For all good quality joinery, the quality of the timber should in all cases be 'Prime' or the best commercial grade, which in some woods is not known as prime, but by terms such as 'Firsts' and 'Selects and Better', this latter applying particularly to Malayan timbers.

The fullest possible information should be given about the heating conditions which the joinery will have to endure when fixed, so that the manufacturer can ensure that it is at a suitable moisture content.

Dry timber will quickly take up atmospheric moisture, and therefore if joinery is made with a low moisture content, say 10 per cent, to stand up to central heating, it should have the best possible protection, and should not be fixed until the plaster has fully dried out. The required finish should always be stated, and also the allowance for machining, which owing to the tendency of nearly all hardwoods to move more than softwood when seasoning, should be at least $\frac{1}{8}$ in. for each wrot surface.

The E.J.M.A. suggest that hardwood should be specified in the following manner:

'Hardwood, unless otherwise stated shall be African Walnut (*lovoa klaineana*) of prime quality or equal. The finished joinery will be installed in buildings with continuous central heating, and the moisture content should suit these conditions.

Joinery should be adequately protected on the site, and stored under dry conditions.

It must not be fixed until the plaster has completely dried out; should it be necessary for any tucking in or pointing to be undertaken, after the joinery is in position, this should be kept to a minimum.

The timber should be finished to take a wax or other polish.

Final wedging up should not be completed until fixing of the joinery is in hand.

All sizes are nominal, and an allowance of $\frac{1}{8}$ in. will be permitted for each wrot face.'

A specification such as the above, together with full information in the bill of quantities about the actual sizes, will enable the joinery manufacturer to give a clear unequivocal price.

A few words here about some of the more commonly used timbers will perhaps be a help:

HARDWOOD

Common Name	Scientific Name	Sawmill Class	Weight at 15% Moisture Content per Cubic Foot	Natural Durability	Movement in Service
ABURA	*Mitragyna ciliata*	3	36	Non-durable	Small
AFRORMOSIA	*Afrormosia elata*	4	44	Very durable	Small
AGBA	*Gossweilerodendron balsamiferum*	3	32	Durable	Small
APITONG	See *GURJUN*				
ASH (European)	*Fraxinus excelsior*	3	44	Perishable	Medium
BEECH (European) ..	*Fagus sylvatica*	3	45	Perishable	Large
BIRCH (European)	*Betula verrucosa*	3	42	Perishable	—
(Canadian)	*Betula spp.*	3	44	Perishable	Large
EKKI	*Lophira alata*	5	60–70	Very durable	Medium
GABOON	*Aucoumea klaineana*	4	27	Moderately durable	—
GEDU-NOHOR	*Entandrophragma angolense*	3	35	Moderately durable	Small
GUAREA	*Guarea cedrata* and *Guarea thompsonii*	4	40	Durable	Small
GURJUN	*Dipterocarpus spp.*	4	46	Moderately durable	Large
IDIGBO	*Terminalia ivorensis*	3	35	Durable	Small
IROKO	*Chlorophora regia and Chlorophora excelsa*	4	41	Very durable	Small
JARRAH	*Eucalyptus marginata*	4	51	Very durable	—
KERUING	See *GURJUN*				

Teak (*Tectona Grandis*). The fullest possible specification should be given for this wood, owing to the very wide price range, which varies with length, width and thickness. It is the only timber in, say, an entrance frame and doors, in which one piece may be twice the price of an adjoining piece.

Oak (*Quercus spp.*). The cut, either Plain or Quartered, should always be specified in oak, quartered being the figured wood. Full details should be given.

Obeche (*Triplochiton scleroxylon*). This timber should never be specified for outside work, or where it is likely to come in contact with damp conditions.

Mahogany (*all species*). Quarter sawn stock tends to show a stripey figure, and this should be specified if required. This also applies to all West African timbers (Sapele, Iroko, Utile, etc.), and to all timbers with interlocking grain.

Iroko (*Chlorophora spp.*). Sometimes difficult to machine, owing to the presence of a hard calcareous deposit, known as stone. It is a very good general purpose hardwood and can be used as a substitute for teak, although it is not quite as strong as teak.

Walnut. It is most essential that the species should be clearly defined for any timber going by the name 'Walnut'.

Meranti. An average shipment of Meranti will contain timber from a number of species and sub-species, and the timber may vary from a pale softish wood to a deep red, close grained variety. It is advisable therefore, if the finished work is to be varnished or polished, to define the kind of wood required, i.e. 'Light Red', 'Dark Red', 'Close Grained'.

The appended short list of hardwoods is intended only for quick reference. For fuller information reference should be made to the D.S.I.R. publication *A Handbook of Hardwoods*, published by H.M. Stationery Office.

The names in Columns 1 and 2, and the weights are taken from B.S.S. 881 and 589: 1955.

The sawmill class figures are taken from The British Sawmilling Classification of Timbers, 1951, and indicate the workability, Class 2 being Mild Hardwoods, Class 3 Medium Textured, Class 4 Refractory and Class 5 Extra Refractory.

The price, which is obviously subject to fluctuation, is per cubic foot for Prime Square Edged stock (or the highest commercial grade) in stock at factory or mill for a fair average specification, December 1957. Selection charges would have to be added to this basic cost.

Generally speaking all species are usually available in square edged stock (unless otherwise stated) in thickness from 1 in. to 4 in.

The species marked 'very durable' can be used externally without treatment, but treatment may be advisable where the timber is in contact with the ground, or with continual damp conditions.

The durability table describes five grades as follows:

Grade of durability	*Approximate life in Contact with the ground (years)*
Very durable	More than 25
Durable	15–25
Moderately durable	10–15
Non-durable	5–10
Perishable	Less than 5

The movement in service is based on the sum of the tangential and radial movements as follows:

	per cent
Small	Under 3
Medium	3 to 4·5
Large	Over 4·5

The Kiln Owners' Association publication, *The Intelligent Use of Timber*, gives details and useful advice about kilning and moisture movement.

Acknowledgment is made to the Department of Scientific and Industrial Research for permission to use the material in Columns 5 and 6; to the British Standards Institution for Columns 1, 2 and 4; and to the National Sawmilling Association for Column 3.

More detailed information is given in the documents mentioned above.

[continued overleaf

Available as Commercially Produced Plywood	Available as Commercially Produced Veneer	Suitable for External Use	Supply Position	Price in Yard	Comments
No	No	No	Fairly Good	20s.	*More generally imported as logs.*
No	No	Yes	Good	31s.	*Liable to stain when in contact with metal.*
Yes, as TOLA	Yes	Yes	Good	22s.	*Often resinous, also has a resinous smell.*
No	Yes	No	Good	36s.	*Price here is for sawn t. & t. at sawmill.*
Yes	Yes	No	Good	25s.	
Yes	Yes	No	Poor	—	*Not a good joinery timber. Only included here as it is one of the commonest plywood timbers.*
No	Yes	No	Fair	16s.	
No	No	Yes	Fairly Good	24s.	*Extremely hard.*
Yes	Yes	No	—	—	*Not easily obtainable as solid timber, and included here because of its extensive use as plywood.*
No	No	—	Poor	24s.	*Also known as Edinam.*
Yes	Yes	Yes	Fairly Good	24s.	*Sometimes exudes resin.*
No	No	Yes	Good	20s. to 24s.	*All the Dipterocarpus species exude gum, sometimes in considerable amounts.*
No	No	Yes	Good	24s.	*Stains in contact with iron. Slight corrosive effect on metals.*
Yes	Yes	Yes	Good	36s.	*Plywood usually to be specially ordered.*
No	No	Yes	Good	23s.	

HARDWOOD—*continued*

Common Name	Scientific Name	Sawmill Class	Weight at 15% Moisture Content per Cubic Foot	Natural Durability	Movement in Service
LAUAN (Red)	*Shorea, Parashorea*	3	39	Durable	—
(White)	*Pentacme spp.*	3	33	Moderately durable	—
MAHOGANY (African)	*Khaya ivorensis* and other *Khaya spp.*	3	33	Moderately durable	Small
(American)	*Swietenia spp.*	3 and 4	35	Durable	Small
MAKORE	*Mimusops heckelii*	4	40	Very durable	Small
MANSONIA	*Mansonia altissima*	3	38	Very durable	—
MAPLE (Rock)	*Acer saccharum*	3	46	Non-durable	Medium
MERANTI (Red)	*Shorea spp.*	3	34	Moderately durable to durable	—
OAK (American Red)	*Quercus spp.*	3	49	Non-durable	—
(American White)	*Quercus spp.*	3	48	Durable	Medium
(European)	*Quercus robur and petraea*	3	45	Durable	Large
(Japanese)	*Quercus spp.*	3	42	Probably not durable	—
OBECHE	*Triplochiton scleroxylon*	2	24	Non-durable	Small
OPEPE	*Sarcocephalus diderrichii*	4	47	Very durable	Small
RAMIN	*Gonystylus spp.*	3	42	Non-durable	Medium
SAPELE	*Entiandrophragma cylindricum*	3	40	Moderately durable	—
SERAYA (White)	*Parashorea spp.*	3	35	Non-durable	—
(Red)	See *MERANTI*				
SILKY OAK	*Cardwellia sublimis*	3	43	Moderately durable	—
SYCAMORE	*Acer pseudoplatanus*	3	39	Perishable	—
TEAK	*Tectona grandis*	4	41	Very durable	Small
UTILE	*Entandrophragma utile*	3	42	Durable	Medium
WALNUT (African)	*Lovoa klaineana*	3	35	Moderately durable	—
(American)	*Juglans nigra*	4	41	Moderately durable	—
(Queensland)	*Endiandra palmerstoni*	5	43	Non-durable	—
(European)	*Juglans regia*	3	41	Moderately durable	—
WAWA	See *OBECHE*				
YANG	*Dipterocarpus spp.*	4	46	Moderately durable	Large

Correspondence

SCANDINAVIA DISCOVERED

The Editor, R.I.B.A. Journal

Sir,—Keith Scott's article 'Scandinavia Discovered' in the September issue of the JOURNAL is evidence of a well-spent visit. But he is less than fair to Aalto when he says that at Säynätsalo 'as in nearly all Aalto's works, there is little evidence that the designer has given any thought whatsoever to the landscape in the immediate environs of the building'.

The community forum at Säynätsalo is the first stage of a plan for a complete town by Aalto, layouts for which are to be seen in Neuenschwander's book.

Aalto's own house near Säynätsalo (the courtyard house at Muratsalo) is superbly placed in complete sympathy with its site, nor can Aalto's layout for the technical high school at Otaniemi be said to ignore its site.

It would be interesting to know a little more of the financing of this last scheme. Aalto's buildings are never cheap but it is hard to believe that the gymnasium at Otaniemi was begun 'in a haze of wishful thinking'. I have heard from someone in Finland that it was largely built with student labour.

Yours faithfully,

PETER SAVAGE [*A*]

BACKWARD READERSHIP

DEAR SIR,—With its October issue our beloved JOURNAL has indeed assumed the leadership of current thought. The articles by Messrs. Buckminster Fuller and Gardner-Medwin will be treasured by many as fruitful sources of inspiration.

Admittedly the language of contemporary theorists is sometimes a little elusive or obscure, but those who wish to appreciate its real beauty and significance should try the effect of reading backwards.

Yours faithfully,

DONALD MCMORRAN [*F*]

Available as Commercially Produced Plywood	Available as Commercially Produced Veneer	Suitable for External Use	Supply Position	Price in Yard	Comments
Yes	No	Yes	Poor	—	*Very similar to Meranti. Included here because of its extensive use as plywood.*
Yes	No	No	Poor	—	
Yes	Yes	Yes	Good	25s. to 33s.	*K. Ivorensis is the commonest of the African mahoganies but other species are shipped.*
No	Yes	Yes	Fair	60s. to 70s.	
Yes	Yes	Yes	Fairly Good	23s.	*Often very difficult to work. Dust is an irritant.*
No	No	Yes	Fairly Good	27s.	*A very good substitute for Walnut. Dust is an irritant.*
Yes	Yes	No	Fairly Good	27s.	*Available only as P. T. & G. flooring or as decorative plywood. Price is per actual yard of 1 in. P. T. & G.*
Yes	No	Yes	Good	21s.	*A good general purpose joinery wood.*
No	Yes	No	Poor	—	*Prices unreliable at date of compilation (October 1957).*
No	Yes	Yes	Poor	—	
Yes	Yes	Yes	Good	36s. to 60s.	*Fullest possible details should be given.*
Yes	Yes	No	Good	40s. to 60s.	*Price varies with thickness.*
Yes	Yes	No	Good	20s.	
No	Yes	Yes	Fair	18s. to 22s.	
No	No	No	Good	18s. to 21s.	*A pale timber subject to stain.*
Yes	Yes	Yes	Good	23s.	
Occasionally	—	No	Fairly Good	25s.	
Occasionally	Yes	No	Poor	30s. to 36s.	*Only available in small quantities.*
Yes	Yes	No	Good	20s. to 32s.	*Plywood available as a decorative veneer.*
Yes	Yes	Yes	Good	40s. to 85s. Fair average 65s.	*Price varies very considerably with size. The fullest possible details, including length, should always be given.*
Occasionally	—	Yes	Good	25s.	
No	Yes	No	Good	29s. to 31s.	
No	Yes	No	Poor	—	
No	Yes	No	Varies, usually poor	—	*Very severe on tools.*
Yes	Yes	No	Varies	—	
No	No	Yes	Fairly Good	21s.	*See GURJUN.*

Franco-British Union of Architects

Annual Conference.

Members of the Franco-British Union of Architects and guests arrived at York on Friday 12 September 1958 for the Annual Conference of the Union. This had been postponed from a date early in June due to the crisis in France at that time.

A visit was made to the York Institute of Architectural Study to see the current exhibition on 'Modern Construction' during the afternoon.

Later on the day of arrival the Annual General Meeting was held at the Royal Station Hotel, during which Mr. R. E. Enthoven, F.S.A. [*F*], succeeded M. Albert Laprade, S.A.D.G., as President of the Union for the year 1958–59. M. Jacques Warnery (Architecte en Chef des Bâtiments Civils et Palais Nationaux) was elected Vice-President. The following architects were elected to membership of the Union: M. Claude Charpentier, M. Jean Merlet, M. Robert Clauzier, M. André Remondet, Mr. Kenneth M. B. Cross (Past President) and Mr. Richard S. Eve [*A*].

The following day a drive across the Yorkshire Wolds took delegates and guests to Kingston upon Hull where they were received at Guildhall by the Lord Mayor and the Lady Mayoress, and the City Architect, Mr. Andrew Rankine [*A*]. Mr. Rankine showed and explained development plans and models and guided delegates on a tour of the city including the waterfront and trawler docks. A visit was made to Beverley Minster on the return journey to York.

On Sunday 14 September delegates drove to Fountains Abbey with a brief stop at Knaresborough to admire the splendid prospect from the castle. After lunch there followed a fine drive through the Yorkshire countryside to Rievaulx Abbey and to Castle Howard.

Professor Sir Albert Richardson [*F*] welcomed delegates on the following morning to York Minster where he gave a historical and architectural commentary and explained the restoration work now in progress. Conducted by Mr. Jesse Green, Clerk of Works, delegates were fascinated to see the nearby workshops and in particular the restoration work being carried out on the stained glass windows.

The Union's visit to York terminated with a banquet held at the Assembly Rooms when the Union was honoured by the presence among the guests of His Excellency M. Jean Chauvel, Ambassador of France in London, and Mde. Chauvel, and of Mr. Cecil Leckenby [*F*], President of the York and E. Yorks. Architectural Society, and Mrs. Leckenby.

The proposed venue for the Conference to be held in the Spring of 1959 is Paris or Fontainebleau.

A.B.S. Cards 1958



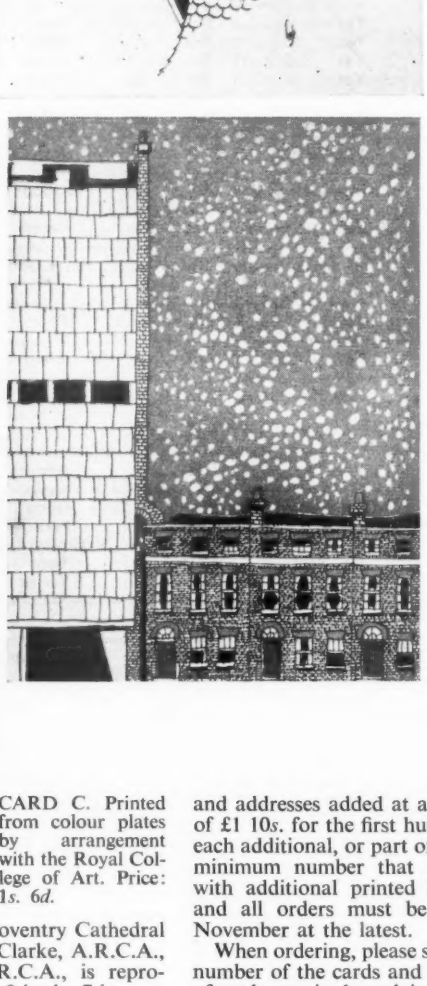
CARD A. Reproduced from an ink drawing by Sir Hugh Casson. Actual size: 6½ by 5¼ in. Price 9*d*.



CARD B. Reproduced from a drawing specially done for the A.B.S. by Brian Bagnall. Size: 6½ by 5 in. Price: 7*d*.



CARD C. Printed from colour plates by arrangement with the Royal College of Art. Price: 1*s*. 6*d*.



CARD D. Designed specially for the A.B.S. by Gordon Cullen. Actual size: 6½ by 4½ in. Price 1*s*.

THE FOUR CHRISTMAS CARDS illustrated above may now be ordered by post or bought direct at the offices of the Architects' Benevolent Society, 66 Portland Place, W.1.

Card A, 'Kings Parade, Cambridge', by Sir Hugh Casson, R.D.I. [*F*], is printed in black on yellow card.

Card B, designed by Brian Bagnall, is printed in black on pink card.

Card C, 'Details of Coventry Cathedral Windows', by Geoffrey Clarke, A.R.C.A., and Lawrence Lee, A.R.C.A., is reproduced in full colour, size 9 in. by 7 in.

Card D, designed by Gordon Cullen, is printed in black, red and grey on white card.

The cards have the words 'Merry Christmas and Happy New Year' printed but purchasers may have their own names and addresses added at an additional cost of £1 10*s*. for the first hundred and £1 for each additional, or part of, a hundred. The minimum number that may be ordered with additional printed lettering is fifty, and all orders must be received by 30 November at the latest.

When ordering, please state the reference number of the cards and the total number of each required, and include the money with the order. If names and addresses are to be printed these should be clearly written in block letters or typewritten.

Specimen cards have been sent out to Allied Societies, where they may be inspected and ordered.

Notes and Notices

NOTICES

Second General Meeting, Tuesday 9 December 1958 at 6 p.m. The Second General Meeting of the Session 1958–59 will be held on Tuesday 9 December 1958 at 6 p.m. for the following purposes:

To read the Minutes of the Inaugural General Meeting held on 4 November 1958; formally to admit new members attending for the first time since their election.

Mr. Percy Johnson-Marshall, A.M.T.P.I. [*A*], to read a paper on 'Comprehensive Redevelopment'.

(Light refreshments will be provided before the meeting.)

Science Lecture, Tuesday 25 November 1958 at 6 p.m. There will be a Science Lecture on Tuesday 25 November 1958 at 6 p.m., when Mr. Eric L. Bird, M.B.E., M.C. [*A*], and Mr. S. D. Studd will read papers on 'Fire Protection'.

(Light refreshments will be provided before the meeting.)

Science Discussion, Tuesday 16 December 1958 at 6.30 p.m. There will be a discussion on 'In Situ Concrete Finishes', on Tuesday 16 December 1958 at **6.30 p.m.**

(*Note:* On this occasion arrangements will be made for a *buffet meal* to be *on sale* before the meeting and, in order to assist the catering, perhaps members and others intending to be present and wishing to avail themselves of this service will kindly notify Mr. Anthony Williams, Assistant Secretary, beforehand.)

The R.I.B.A. London Architecture Bronze Medal 1958. The attention of members is drawn to the form of nomination and the conditions subject to which the award will be made for a building built within the Counties of London and Middlesex during the three years ending 31 December 1958, enclosed with this issue of the JOURNAL. Any member of the R.I.B.A. may nominate any building for consideration by the jury.

Nomination forms must be returned to the Secretary, R.I.B.A., not later than 28 February 1959.

British Architects' Conference 1959. The British Architects' Conference 1959 will be held at Cardiff from 10 to 13 June, at the invitation of the South Wales Institute of Architects. Full details of the programme will be published in due course. Particulars of accommodation in hotels will be published in an early issue of the JOURNAL.

Kalendar Supplement: Corrections. It is regretted that on page 80 of the new Supplement to the current edition of the Kalendar, recently issued to members and Students, an asterisk incorrectly appears against the name of **Mrs. Barbara Gwynaeth Wise,** B.A.(Arch.). Mrs. Wise resigned her Associateship of the R.I.B.A. on 20 May 1958.

On page 36 of the Supplement, the address of **Cawdron: Edward John Hugh,** is given as 4a Crescent Way, Orpington. This should read **19a** Crescent Way.

Associates and the Fellowship. Associates who are eligible and desirous of transferring to the Fellowship are reminded that as from 1 January 1956 all candidates for the Fellowship will be required to submit to the Fellowship Examiners drawings and photographs or examples of work. Candidates may also be required to attend for an interview, which may however be dispensed with at the discretion of the Fellowship Examiners. The necessary nomination forms may be obtained from the Secretary, R.I.B.A.

Licentiates and the Fellowship. By a resolution of the Council passed on 4 April 1938 all candidates whose work is approved are required to sit for the Examination, which is the design portion of the Special Final Examination, and no candidates will be exempted from the Examination.

Note.—The above resolution does not affect Licentiates of over 60 years of age applying under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925.

Architectural Competition—Assessors' Awards. All architects who take part in architectural competitions are reminded by the Council of the R.I.B.A. that participation in a competition is a definite acceptance of the principle that the award of the assessors is final and binding upon themselves as well as upon the promoters, and that any competitor who feels that he has real ground for dissatisfaction with an assessor's award should communicate with the Secretary of the R.I.B.A.

Further, all architects, whether competitors or otherwise, are reminded that discussion or correspondence in the public or professional press which tends to criticism or disparagement of an assessor or award cannot alter the final and binding effect of the award, but may prejudice architects and the whole competition system in the opinion of the public, and is therefore highly undesirable.

The Acceptance of Pupils and Junior Assistants and the Probationership of the R.I.B.A. The Board of Architectural Education have noticed that the practice still persists of members accepting pupils or junior assistants without satisfying themselves that such pupils or junior assistants have reached the necessary standard of general education for the Probationership. Members are reminded that it is most important that they should not take boys or girls into their offices unless they possess one of the qualifications laid down.

A list of the recognised examinations can be obtained on application to the Secretary, R.I.B.A.

COMPETITIONS

Design for Small Houses. IDEAL HOME magazine in association with the Royal Institute of British Architects invite corporate members of the R.I.B.A. to submit in competition designs for small houses.

The assessors will be: Mr. Clifford Culpin, M.T.P.I. [*F*], Mr. Peter Dunham [*F*], Mr. Eric Ambrose, B.A.(Arch.) [*F*], and the last date for submitting designs will be noon on 30 January 1959.

The Assessors will select 30 designs covering a variety of categories, size ranges and prices, the maximum floor area being 1,100 sq. ft. and the maximum price £4,500.

In place of the premiums usually awarded to the authors of the winning designs in competitions, fees will be paid to the 30 successful competitors. The fees will be made up of a cash payment of £75 plus a royalty of £10 for each set of prints of working drawings sold.

Conditions may be obtained from 'Ideal Home' Architectural Competition, 96 Long Acre, London, W.C.2.

Stand for the Carter Group of Companies at the 1959 Building Exhibition. Messrs. Carter and Co. Ltd. invite architects and students of architecture who have reached the R.I.B.A. Intermediate stage or its equivalent to submit designs in competition for a stand to be erected at the Building Exhibition, Olympia, 1959.

Assessors: Mr. Howard V. Lobb [*F*], Mr. Denys Lasdun [*F*], Mr. C. C. Carter, Chairman of Messrs. Carter and Co. Ltd.

Premiums: £100, £75 and a further sum of £75 to be awarded at the Assessors' discretion.

Last day for submitting designs: 12 noon, 10 February 1959.

Conditions may be obtained on application to Messrs. Carter and Co. Ltd., Poole, Dorset.

Wokingham County Infants' School. Last date for submitting designs: 15 December 1958.

Full particulars were published in the JOURNAL for August, page 355.

International Competition. A note has been received from the International Union of Architects that the conditions of the following competition have been approved by them:

Monument to Jose Batlle, Montevideo (Uruguay). Last day for submitting designs is 15 December for competitors living in Uruguay, Argentina, Brazil, and Paraguay, and for competitors elsewhere, 30 December 1958.

Full particulars were published in the JOURNAL for July, page 323.

COMPETITION RESULT

Toronto City Hall: International Competition.

Winner: Viljo Rewell, Helsinki, Finland.

BOARD OF ARCHITECTURAL EDUCATION

R.I.B.A. (Archibald Dawnay) Trust Prizes, 1958. The R.I.B.A. (Archibald Dawnay) Trust Prizes for 1958 have been awarded as follows:—

Prize of £100 to Mr. G. A. Stenhouse of the School of Architecture, Edinburgh College of Art.

Prize of £100 to Mr. C. H. Stewart of the School of Architecture, Edinburgh College of Art.

Prize of £100 to Mr. C. R. Musson of the Welsh School of Architecture, Cardiff.

ALLIED SOCIETIES

Changes of Officers and Addresses

Birmingham and Five Counties Architectural Association. Joint Hon. Secretaries, B. V. James [*A*], 49 Frederick Road, Edgbaston, Birmingham, 15, and G. R. Cleaver [*A*], 318 Hamstead Road, Handsworth, Birmingham, 20.

North Staffordshire Architectural Association. Change of address of Secretary, J. P. Elliott, to 16 Water Street, Newcastle, Staffs.

Sheffield, South Yorkshire and District Society of Architects and Surveyors. The Society's address is now 17 Broomgrove Road, Sheffield, 10 (President, S. E. Shepherd [*L*]. Hon. Secretary, G. R. Adams, D.F.C., A.M.T.P.I. [*A*]).

East Africa Institute of Architects. Tanganyika Chapter. Pending the establishment of the Tanganyika Chapter and the appointment of Honorary Officers, the following have agreed to act as Corresponding Members: H. T. French, B.Arch.(C.T.) [*A*], A. E. J. Hastings [*F*], P.O. Box 695, Dar-es-Salaam, Tanganyika.

Royal Australian Institute of Architects. Tasmanian Chapter. President, C. W. Crawford, Messrs. Johnston, Crawford and Partners, 130 Collins Street, Hobart, Tasmania.

Preston, Blackburn and District Society of Architects. Joint Symposium on 'Consultants and Specialists'. The Society is holding its third joint symposium in co-operation with the Building Centre, the Lancashire, Cheshire, and Isle of Man Branch of the R.I.C.S., and the North-Western Federation of Building Trade Employers at the College of Further Education, Alston Hall, Longridge, from 5 to 7 December.

In the closing sessions of the last symposium many points arose on the relationships of the architect, builder and quantity surveyor with the specialists, both consultant and contracting. The subject matter of the 1958 symposium is planned to focus attention first on this relationship, and secondly on the lessons which the building industry may learn from past experience. The principal speakers will be the President of the Society, Mr. R. Allport Williams, M.B.E. [*F*]; Mr. H. C. Husband, B.Eng., M.I.C.E., M.I.Mech.E., M.I.Struct.E., on 'The consultant's view of the building industry'; Mr. W. R. Howard, M.I.Struct.E., F.S.E., on 'The specialist sub-contractor's view of the building industry'; Mr. E. T. Roberts, Vice-President of the Manchester and Salford Architects, Builders and Quantity Surveyors J.C.C.; Mr. Nigel Hannen, B.A., F.I.O.B., a member of the National Joint Consultative Committee of Architects, Quantity Surveyors and Builders on 'The contractor's view of the all-in service'; and Mr. R. McGuire [*A*], Mr. L. N. R. Davies, F.R.I.C.S., and Mr. Kenneth Taylor, B.Sc., M.I.O.B., on 'What went wrong?' The summing-up will be by Mr. Gontran Goulden [*A*], Deputy Director of the Building Centre.

Charges are: Friday evening to Sunday lunch, £2 12*s.* 6*d.*; non-residential 14*s.* 6*d.* per day, 7*s.* 6*d.* per half-day.

Members who wish to attend should notify the Hon. Secretary, Mr. F. A. Hewitt [*A*], 'Coppins', Hill Road, Penwortham, Preston, by first post, 21 November, enclosing a booking fee of £1.

GENERAL NOTES

Cambrian Archaeological Association. At the annual meeting of the Cambrian Archaeological Association, Dr. T. Alwyn Lloyd [*F*] was elected President.

He is believed to be the only architect to have held this office during the 112 years of the Association's history.

Discussion at the Building Centre. The Brixton School of Building, the Building Centre and the Ministry of Works are collaborating in arranging a discussion on 'Operational Research and Building Management' to be held at the Building Centre, Store Street, W.C.1, on 25 November at 6.30 p.m. The Chairman will be Mr. R. M. Wynne-Edwards, M.I.C.E.

Speakers from the platform will be Mr. Thomas V. Prosser, F.I.O.B., Senior Vice-President of the N.F.B.T.E., Dr. J. C. Weston, Ph.D., B.Sc., of the Building Operations Research Unit, B.R.S., and Mr. C. A. Francis.

The general discussion will be opened by Mr. S. A. W. Johnson-Marshall [*A*].

British Ceramic Society. Autumn Meeting. The autumn meeting of the British Ceramic Society (Building Materials Section) is to be held on Tuesday and Wednesday 2 and 3 December at the Junior Institution of Engineers, 14 Rochester Row, Westminster, S.W.1. At 2 p.m. on the afternoon of Tuesday 2nd, S. B. Hamilton, O.B.E., M.Sc., Ph.D., A.R.C.S., M.I.C.E., M.I.Struct.E., P.P.I. Struct.E., is to present a paper 'The History of Hollow Bricks', and B. Butterworth, B.Sc., F.I.Ceram., A.R.I.C., and D. Foster, Dip.Arch. [*A*], of the Building Research Station, are also to present 'The Development of Fired Earth Bricks, Part V, Proposals for Development in Britain'. This reviews work on new bricks which the Building Research Station has been doing over the past three years.

As the papers will undoubtedly be of great interest to the architectural profession, mem-

Notes from the Minutes of the Council

MEETING HELD ON 7 OCTOBER 1958

Appointment of R.I.B.A. Representatives

(*a*) *Southend-on-Sea Municipal College: Architecture, Surveying and Building Advisory Committee.* P. F. Burridge [*F*].

(*b*) *Regional Advisory Council for Higher Technological Education: Regional Advisory Committee for Building.* D. E. E. Gibson [*F*].

(*c*) *Regional Advisory Council for Higher Technological Education: Art and Industrial Design Advisory Committee.* R. E. Enthoven [*F*].

(*d*) *Associated Examining Board for the General Certificate of Education.* J. Kenneth Hicks [*F*] re-appointed.

(*e*) *British Waterworks Association: Standing Committee on Water Regulations.* A. H. Ley [*F*] re-appointed.

(*f*) *R.I.B.A. Architecture Bronze Medals: R.I.B.A. Representatives to serve on Juries to consider Awards.* (i) *Royal Society of Ulster Architects.* A. H. Hope [*A*], President of the Royal Institute of the Architects of Ireland. (ii) *Hampshire and Isle of Wight Architectural Association.* R. Duncan Scott [*F*].

(*g*) *Codes of Practice Committee and B.S.I. Committees.* (i) *B.S.I. Committee HIB*/26—*Ironmongery Glossary.* P. A. Newnham [*A*]. (ii) *B.S.I. Committee PLC*/24—*Polyester Resins.* H. H. Clark [*F*]. (iii) *B.S.I. Committee ISE*/13—*Standard Steel Sections.* W. Goodesmith [*F*] in place of T. Ritchie [*F*]. (iv) *B.S.I. Committee PVC*/–: *Pigments, Paints and Varnishes Industry Standards.* M. J. Keyte [*A*]. (v) *B.S.I. Committee ELCP*/13—*Street Lighting for Traffic Routes.* David Cole [*A*]. (vi) *B.S.I. Committee S*/29—*Stationery for Quantity Surveying.* C. M. Cuthill [*A*]. (vii) *B.S.I. Committee CVCP*/5—*Revision of Civil Engineering Code No.* 5 *Drainage* (*Sewage*). F. H. Lloyd [*A*].

Honours and Awards. The congratulations of the Council were conveyed to Mr. H. W. Langham-Hobart [*Student*] (Basutoland) on the award of the M.B.E. in the Birthday Honours List.

Amendments to Rules of Allied Societies. Formal approval was given to amendments to the rules of the Berks, Bucks and Oxon Architectural Association and the Institute of Architects of Malaya.

Date for Special General Meeting to Report on Review of the Constitution. The Council noted that the Special General Meeting to report on the Review of the Constitution had been fixed for Tuesday, 6 January 1959 immediately after the Prizes Deed of Award.

Security for and Payment of Arbitrators' Fees. The Council approved the recommendation of the Practice Committee that the paragraph in the R.I.B.A. Form for the Appointment of an Arbitrator which at present reads:—

'I/We jointly and severally agree to provide adequate security for the due payment of any fees, costs and expenses of the Arbitrator in connection with this application and the Arbitration and to take up the Award within ten days from receipt of notice of publication.'

should be amended to read as follows:—

'As a Condition of the Appointment I/We hereby agree as follows:—

(i) To provide adequate security for the due payment of the fees and expenses of the Arbitrator if he so requires.

(ii) To pay the fees and expenses of the Arbitrator in accordance with the R.I.B.A. Scale of Charges or in accordance with any agreement in writing between myself/ourselves and the Arbitrator, whether the arbitration reaches a Hearing or not.

(iii) To take up the Award (if any) within ten days from receipt of notice of publication.'

Membership. The following members were elected: as Fellows 6; as Associates 98.

Students. 71 Probationers were elected as Students.

Applications for Election. Applications for election were approved as follows: *Election 9 December* 1958: as Associates 55. *Election 3 February* 1959 (*Overseas Candidates*): as Associates 30.

Applications for Reinstatement. The following applications were approved: as Fellow: Sadashiv Raghunath Yardi; as Associates: Patrick Pearse Freyer, Mervyn Bellwood Handley, Leonard Frederick William Lock; as Licentiate: John George Sutherland.

Resignations. The following resignations were accepted with regret: Thomas William Henry [*F*], Charles Rand Overy [*Retd. F*], Mrs. Pamela Elizabeth Barton [*A*], David Devlin [*A*], George Edward James Wilfred Garrard [*A*], Mrs. Beryl Owen [*A*], Mrs. Elizabeth June Parkinson [*A*], Edward Kenneth Smart [*A*], Charles Stanley Brown [*L*], Thomas Capsticks [*L*], James Symington Houston [*L*], James Longdon Kite [*L*], Donald Norman Roy [*L*], Norbert Bowes Shaw [*L*], Raymond Walker [*L*].

Applications for Transfer to Retired Members' Class under Bye-law 15. The following applications were approved: as Retired Fellows: Ernest Frear, Robert B. J. Selby. As Retired Associates: Kenneth John Bonser, Harry Mackay, James Blakeney Symonds. As Retired Licentiate: William George Percy.

Obituary. The Secretary reported with regret the death of the following members: Sir John Marshall, C.I.E., Litt.D., D.Litt. [*Hon. A*], Sir Stephen Tallents, K.C.M.G., C.B., C.B.E. [*Hon. A*], Herbert John Davies [*F*], Charles Henry Gage [*F*], Harry Beckett Swift Gibbs [*F*], Albert James Hazelgrove, LL.D.(Manitoba), F.R.A.I.C. [*F*], William Jelf Rogers [*F*], Robert Wemyss Symonds [*F*], Samuel Taylor [*F*], Kenneth Frederick Templeman [*F*], Sir Richard John Allison, C.V.O., C.B.E. [*Retd. F*], Arnold Edwin Brooks [*Retd. F*], Frederick George Drewitt [*Retd. F*], Arthur Purcell Lay [*Retd. F*], Howell Prosser [*Retd. F*], Norman Richley [*Retd. F*], James Osbert Thompson [*Retd. F*], Digby Blair Bailey [*A*], Robert Charles Callahan [*A*], Arthur B. Forbes [*A*], Aubrey Edward Prower [*A*], Ernest Alexander Rahles Rahbula, O.B.E., M.C., F.S.A. [*A*], Gerald Victor Richards [*A*], Frederic Rosenbaum [*A*], James Grieve [*Retd. A*], Edwin Gunn [*Retd. A*], James John Glendinning [*L*], Sydney Maurice Ralph [*L*], Norman Read [*L*], Thomas Herbert Rowntree [*L*], Thomas Henry Murray [*Retd. L*], Lomax Raymond Brownlow Palmer [*Retd. L*], William Alfred Raymond Evans [*Student*], Dhunjisha Pirosha Turner [*Student*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

bers of the R.I.B.A. are invited to attend this meeting, and take part in the discussion.

Local Government Architects' Society
The Provisional Executive Committee of the Local Government Architects' Society was appointed in June with instructions to consider and report in approximately six months to a representative meeting of members on such items as range and scope of membership, the organisation and financial policy of the Society, participation with other similar professional organisations in discussion and negotiation with the N.J.C. and relations with the R.I.B.A. and trade unions having architect members.

The first meeting held on 4 July 1958 gave the organisation of Sub-Committees, etc., and the second meeting of the Committee, which was held on Friday 12 September 1958 was primarily to consider reports of the Sub-Committees on Organisation and Finance, Negotiation, and Membership. Mr. Thurston Williams [*A*] was in the chair.

In discussing the Report of the Organisation and Finance Sub-Committee it was decided that the recommendation would be made to the next general meeting that 'The Society should be controlled by a General Council part of which to be elected Nationally and part Regionally, and an Executive Committee, elected from, and by, the General Council. Also certain designated officers to be elected Nationally.' It was also agreed that all offices employing architects should be invited to send a representative to the next general meeting. Only representatives from offices having members in the Society can be delegates with powers to vote.

The Negotiations Sub-Committee reported progress in connection with their investigations into the position regarding architects' salaries and conditions, and also are making arrangements to meet the heads of other societies and associations.

The resolution of the Membership Committee that the Membership of the Society should, in the first instance, be restricted to Chartered Architects and Registered Architects in salaried employment with local government authorities and statutory bodies and public authorities was accepted. The Hon. Treasurer, Mr. J. T. Bell [*A*], reported that there were now over 1,000 members of the Society.

The Executive Committee are hoping that the number of members will continue to rise, and all architects working for local authorities, statutory bodies and public authorities who are not already members are asked to obtain application forms from the nearest local representatives of the Society or from Mr. N. A. Goss [*A*], Assistant Secretary (Registrations), Local Government Architects' Society, 5 Beatty Lane, Basildon, Essex.

R.I.B.A. Golfing Society. The R.I.B.A. Golfing Society held their autumn meeting at St. George's Hill Golf Club on 8 October 1958.

In the morning the Selby Bowl was won by F. C. Sheffield [*A*] (18). Score 89 − 18 = 71. The runner-up was C. Tucker [*A*] (8). Score 82 − 8 = 74.

In the afternoon the Joseph Emberton Memorial Trophy was played as a foursomes competition, partners being chosen from the high and low handicap sections of the Society. The winners of the Trophy were S. H. Statham [*A*] and C. A. Townsend [*A*], with a score of 33 points. The runners-up were G. F. Wilson [*L*], and John Grey [*F*], with a score of 29 points.

The Annual General Meeting was held in the evening with Sir Giles Gilbert Scott [*F*], the President, in the chair. The Secretary reported a successful year's golf, with an increase in the numbers of members in the Society. A vote of thanks was passed to the retiring Captain, R. G. Scott [*A*], and Alan Maudsley [*A*] was elected Captain for 1959. The meeting concluded with a vote of thanks to S. H. Statham for his work during the past year.

Membership Lists

ELECTION: 7 OCTOBER 1958

The following candidates for membership were elected on 7 October 1958.

AS FELLOWS (8)

Bragg: Stanley Edward [*A* 1938], Witham.
Collins: John Edward [*A* 1951], Bristol.
Double: Robert James [*A* 1947].
Kirkwood: James, D.A.(Glas.) [*A* 1948], Singapore, Malaya.
Polkinghorne: Richard William Joseph, F.R.I.C.S. [*A* 1950], Nairobi, Kenya.
Smith: Haydn William [*A* 1949], Manchester.

and the following Licentiates who are qualified under Section IV, Clause 4(*c*)(*ii*) of the Supplemental Charter of 1925:—

Levitt: Frederick Charles, Biggleswade.
Wright: Joshua Stanley, M.C., Leeds.

AS ASSOCIATES (98)

Albakri: Ikmal Hisham, Dip.Arch.(Sheffield), Kuala Lumpur, Malaya.
Anderson: Keith Robert, Dip.Arch.(Auck. N.Z.), Christchurch, New Zealand.
Ashdown: Michael Frank Bruce, Dipl.Arch. (U.C.L.), Wedmore.
Baines: Eric, Dip.Arch.(Nottm.), Matlock.
Bannister: James, Dip.Arch.(Sheffield), Preston.
Bartlett: James Harold, B.Arch.(Melbourne), Montmorency, Victoria, Australia.
Barzel: Naim, A.A.Dipl., Westmount, P.Q., Canada.
Bhonsale: Dagadoo Savalaram, Bombay, India.
Billingham: John David.
Bishop: David, Dipl.Arch. (Northern Polytechnic), Richmond, Surrey.
Bond: Peter Bernard, A.A.Dipl.
Box: Richard Cecil.
Brindley: John Millard, A.S.T.C.(Arch.), Sydney, Australia.
Brown: Dennis John Trevor, Dipl.Arch. (Oxford), Guildford.
Burton: Geoffrey, Farnborough.
Classey: Eric Cyril, Dipl.Arch.(Northern Polytechnic).
Clyne: (Miss) Coila Christine, Dipl.Arch. (Northern Polytechnic), Ware.
Collins: Edgar Tahu, Dip.Arch.(Auck.N.Z.), New Plymouth, New Zealand.
Coote: Michael Russell, B.Arch.(C.T.), Ndola, Northern Rhodesia.
Critchlow: David Michael.
Dann: Frank James Winstone, Dipl.Arch. (Oxford), Leamington Spa.
Davey: Wilfred Allan, A.S.T.C.(Arch.), Sydney, N.S.W., Australia.
Davison: John Reginald, Dipl.Arch. (Northern Polytechnic).
de Rosario: Lionel St. Joseph, Dipl.Arch. (Oxford), Singapore, Malaya.
Des Graz: (Miss) Bridget Mary Rhona, A.A.Dipl.
Donaldson: George Ian, Sydney, N.S.W., Australia.
Donat: John Annesley, A.A.Dipl.
Donnelly: Michael Raphael, B.Arch.(N.U.I. Dublin), Belfast.
Elsworth: Brian, Dipl.Arch.(Leeds).
Erber: Eric.
Feilding: (Miss) Julia F. M. G., Dipl.Arch. (Oxford), Pembroke, Ontaria, Canada.
Forster: Peter Wakefield, A.A.Dipl., Montreal, P.Q., Canada.
Foster: John Edwin, Dipl.Arch. (Northern Polytechnic), Byfleet.
Girdlestone: Eric Geoffrey.
Gloag: Bruce Stuart Leuchars, B.Arch. (Rand).
Going: Patrick Lawrence, B.Arch.(C.T.), Kitwe, Northern Rhodesia.
Harker: Thomas Swinburne, Burton-in-Wirral.
Harrington: John Hunter, Dip.Arch. (Nottm.), Nottingham.
Hassall: Antony John, Dipl.Arch.(Northern Polytechnic), Gillingham.
Helliwell: Brian, B.Arch.(Dunelm), Nelson.
Hendry: Donald Rushton, Dipl.Arch. (Northern Polytechnic), Ipswich.
Heppell: Nigel James, Dip.Arch.(Sheffield).
Hepton: Laurie, Lusaka, Northern Rhodesia.
Hinge: Ronald Bernard, Dipl.Arch.(Northern Polytechnic).
Hoh: Su Loong, B.Arch.(Melbourne), Kuala Lumpur, Malaya.
Holgar: (Mrs.) Helena Ptaszynska, Ivanhoe, Victoria, Australia.
Holgar: Wladyslaw Aleksander Janusz Ptaszynski, Ivanhoe, Victoria, Australia.
Holliday-Scott: John, Saskatoon, Saskatchewan, Canada.
Hollingsworth: Ivor, Eastwood.
Houghton: Joseph Kevin, Dip.Arch.(Birm.), Toronto, Ontario, Canada.
Jelicich: Stephen Albert, B.Arch.(Auck. N.Z.), Auckland, New Zealand.
Johnson: Rex Sutherland, Dipl.Arch. (Northern Polytechnic).
King: David Reginald, Dip.Arch.(The Polytechnic), Salisbury.
Krishnapillai: Murugasu, B.Arch.(Melbourne), Karainagar, Ceylon.
Lines: Peter Ellis, B.Arch.(C.T.), Ndola, Northern Rhodesia.
Loney: William Peter.
Macfee: James Jarvie, D.A.(Glas.), Vancouver, B.C., Canada.
Macpherson: Ian C., B.A.(Arch.)(Lond.), Leatherhead.
Mandrekar: Shreekant Govind, Bombay, India.
Mistry: Mulchanddas Jivanbhai, Bombay, India.
Mungham: John Arthur, Dipl.Arch.(Northern Polytechnic).
Munn: Antony Cecil, Dipl.Arch.(Northern Polytechnic).
Ng: Puay Kwang, D.A.(Dundee), Singapore, Malaya.
Nixon: Robert, Dip.Arch.(C.T.), Cape Town, S. Africa.
O'Neill: Hugh Chichester, Ipswich.
Panayiotou: Elefterios, Famagusta, Cyprus.
Pavri: Bomi Munchershaw, Bombay, India.
Phedonos: Georges J., B.A.(Arch.)(Sheffield), Larnaca, Cyprus.
Phippen: Peter.
Porter: Samuel Harold.
Powar: Shankerrao Laxmanrao, Rangoon, Burma.
Rebanks: Leslie, Pembroke, Ontario, Canada.
Richardson: James William, Cobham.
Ringshall: Ronald James, A.A.Dipl., Sutton.
Ritchie: William, B.Arch.(C.T.), Mufulira, Northern Rhodesia.
Ross: John, B.Arch.(Rand.).
Roth: Stephen John.
Rushton: Alan, Blackburn.
Ryan: Michael Enda, B.Arch.(N.U.I.Dublin), Dalkley, Co. Dublin.

Sawardekar: Ramakant Tukaram, Calcutta, India.

Sehmi: Narindra Singh, Nairobi, Kenya.

Shand: Robert Ian, B.Arch.(C.T.), Ndola, Northern Rhodesia.

Sharma: Brij Mohan, New Delhi, India.

Shaw-Stewart: Michael, M.A.(Cantab.), A.A.Dipl., Haddington.

Shearer: Lloyd Alvin, B.Arch.(Toronto), Toronto, Ontario, Canada.

Sheppard: Norman James, Dip.Arch.(Auck. N.Z.), Christchurch, New Zealand.

Spence: Philip Hill, D.A.(Glas.), Coatbridge.

Storm: Charles Vivian, Dipl.Arch.(Leeds). Montreal, P.Q., Canada.

Streatfield: David Claude, Hove.

Sutherland: John David, B.Arch.(Wales), New Plymouth, New Zealand.

Thornton: Ian Charles, M.C.D., B.Arch. (L'pool), Rochdale.

Vickery: Bruce Arthur, A.S.T.C.(Arch.), Sydney, N.S.W., Australia.

Wandrekar: Sumant Harishchandra, Bombay, India.

West: David James, Farnham.

White: James Peter, Dip.Arch.(Sheffield), Sheffield.

White: Thomas Frederick Randle, Milford Haven.

Whitehouse: Peter Jack, Dip.Arch.(Sheffield), Lagos, Nigeria.

Worsley: Charles Robert, B.Arch.(Toronto), Toronto, Ontario, Canada.

ELECTION: 9 DECEMBER 1958

An election of candidates for membership will take place on 9 December 1958. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday, 17 November 1958.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (55)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Absalom: Donald Glanville, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.), 16 Belmont Avenue, Poulton-le-Fylde, Lancs. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Aitken: Alastair Roberts Innes, (Final), Alyn Cottage, Rowley Green Road, Arkley, Herts. T. E. Scott, A. M. Gear, E. A. S. Houfe.

Bainbridge: Keith, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne: Sch. of Arch.), Salisbury House, Front Street, Medomsley, Co. Durham. Prof. W. B. Edwards, F. Fielden, Bruce Allsopp.

Bates: Raymond Davis, A.A.Dipl.(Arch. Assoc.(London): Sch. of Arch.), 6 Warwick Park, Tunbridge Wells, Kent. Arthur Korn, G. H. N. Inman, H. A. J. Darlow.

Bowman: Fraser, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 14 South Learmonth Gardens, Edinburgh 4. J. R. McKay, W. H. Kininmonth, Esme Gordon.

Burton: Richard St. John Vladimir, A.A. Dipl. (Arch. Assoc.(London): Sch. of Arch.), 112 Clifton Hill, N.W.8. Arthur Korn, Philip Powell, Hidalgo Moya.

Buttress: Donald Reeve, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.), 19 Wellfield Road, Stockport, Cheshire. W. C. Young, Prof. R. A. Cordingley, Dr. W. A. Singleton.

Campbell: James, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 16 Sinclair Street, Thurso, Caithness. Applying for nomination by the Council under Bye-law 3(*d*).

Campbell: Patrick, B.Arch.(N.U.I. Dublin) (Univ. Coll. Dublin, Ireland: Sch. of Arch.), One Upper Hatch Street, Dublin. Prof. J. V. Downes, Vincent Kelly, Wilfrid Cantwell.

Cannell: Christopher John Albert, Dipl. Arch.(Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 8 Orchard Drive, Watford, Herts. Guy Morgan, H. C. Inglis, C. G. Bath.

Cassidy: Francis George, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 25A, Ryehill Avenue, Edinburgh 6. John Holt, T. W. Marwick, R. F. Hutchison.

Clark: Stewart Charles, D.A.(Dundee), 24 Thomson Street, Perth Road, Dundee. Prof. John Needham, S. E. T. Cusdin, J. M. Easton.

Cradick: Harold George [*L*], (Special Final), 16 Kilham Lane, Winchester, Hants. Richard Mellor, Henry Pyne, S. V. Goodman.

Crawley: Albert Ferdinand Donal, M.A., D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 74 Brunswick Road, Bangor, Co. Down, N. Ireland. Prof. R. H. Matthew, J. R. McKee, Frank Wood.

Crownshaw: Raymond, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), 531 Stannington Road, Sheffield 6. Prof. Stephen Welsh, Prof. John Needham, H. B. Leighton.

Duncan: Kenneth Murray Marr, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 28 Carfrae Gardens, Edinburgh 4. W. H. Kininmonth, J. S. Johnston, T. W. Marwick.

Fuller: Deric William, A.R.I.C.S. (Special Final), 22 St. Mildred's Road, Ramsgate, Kent. W. R. H. Gardner, H. Anderson, H. C. Ashenden.

Garland: John, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 19 Stenhouse Crescent, Edinburgh 11. J. R. McKee, Frank Wood, W. E. Hollins.

Gooding (Miss) Elaine Kathleen Mulhern, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 24 Lismoyne Park, Belfast, Northern Ireland. R. S. Wilshere, E. D. Taylor, J. H. Swann.

Gordon: Rodney Henry (Arch. Assoc.(London): Sch. of Arch.), 8 Albert Studios, Albert Bridge Road, S.W.11. Arthur Korn, M. Pattrick, Edwin Williams.

Griffin: Derek Harrison, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 9 Old Hill Court, Old Station Hill, Chislehurst, Kent. T. E. Scott, H. H. M. Griffin, C. G. Bath.

Hards: Victor Albert, (Special Final), 37 Kingsholm Gardens, Eltham, S.E.9. Applying for nomination by the Council under Bye-law 3(*d*).

Hawthorn: George Sorby Nelson, D.A.(Glas.) (Glasgow Sch. of Arch.), 2 Crescent Gardens, Belfast. T. J. Beveridge, Prof. W. J. Smith, E. D. Taylor.

Hersey: Harold, (Special Final), 28 Duchess Drive, Denton, Newcastle upon Tyne 5. E. Firth, G. A. Crockett, L. S. Stanley.

Hillier: Kenneth Gordon, Dip.Arch.(Cardiff) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 2 Church Close, Croes-y-ceiliog, Cwmbran, Mon. Lewis John, E. J. E. Moore, C. F. Bates.

Hives: Colin Vinan (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), 46 Queens Road, Reading, Berkshire. Hubert Bennett, Edwin Williams, A. E. Miller.

Horspool: George Borland, D.A.(Glas.) (Glasgow Sch. of Arch.), 1 Cuthbert Place, Kilmarnock, Ayrshire. Prof. W. J. Smith, A. D. Cordiner, Gabriel Steel.

Howard: Alan Derek, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), 8 The Baulk, Worksop, Notts. Prof. Stephen Welsh, Prof. John Needham, H. B. Leighton.

Jones: Roy, B.A.(Arch.) (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 29 Manor Road, Darlington. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Kaczmarczyk: Stefan, (Special Final), 12 Glengarry Road, S.E.22. Applying for nomination by the Council under Bye-law 3(*d*).

Kay: Geoffrey, (Special Final), 53 Almond Road, Cantley, Doncaster, Yorks. Cecil Stewart, A. Douglas Jones, H. A. Hickson.

Kneale: Evan Anthony, B.Arch.(Liverpool) (Liverpool Sch. of Arch.: Univ. of Liverpool), Flat 3, 17 Aigburth Drive, Liverpool 17. Prof. R. J. Gardner-Medwin, B. A. Miller, R. R. Young.

Koralek: Paul George, A.A.Dipl.(Arch. Assoc. (London): Sch. of Arch.), 27 Greenhill, N.W.3. Arthur Korn, Philip Powell, Hidalgo Moya.

Lubicz-Nycz: Jan, (Final), 13 Dealtry Road, S.W.15. Reginald Vaughan and applying for nomination by the Council under Bye-law 3(*d*).

Meyer: Ralph, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 201 Green Lane, Finham, Coventry, Warwicks. Applying for nomination by the Council under Bye-law 3(*d*).

Mill: Alain Barry, B.Arch.(Auck., N.Z.) (Passed a qualifying Exam. approved by the N.Z.I.A.), c/o Bank of New South Wales, 47 Berkeley Square, W.1. Prof. C. R. Knight, Prof. A. C. Light and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Moorhouse: John Brian, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), 28 Penmore Street, Hasland, Chesterfield. Prof. Stephen Welsh, Prof. John Needham, H. B. Leighton.

Neilson: Matthew, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), 9 Nelson Street, Dundee, Angus. Prof. John Needham, A. G. Henderson, Walter Underwood.

Pike: Alexander Thomas Henry Paul, (Final), 34 Dorchester Court, S.E.24. A. M. Gear, E. M. Rice, A. F. B. Anderson.

Reid: John Archibald Harvey, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 91 High Street, Aberdour, Fife. James Shearer, Esme Gordon, W. G. Dey.

Robb: James, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 24 Elmbank Terrace, Aberdeen. E. F. Davies, A. B. Gardner, D. J. A. Ross.

Robson: Peter Langley (Passed a qualifying Exam. approved by the I.S.A.A.), 43 West Cromwell Road, Earls Court, S.W.7. Applying for nomination by the Council under Bye-law 3(*d*).

Rogers: Philip Gordon Hardy, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 279 Vicarage Farm Road, Heston, Middlesex. J. S. Walkden, David Jenkin and applying for nomination by the Council under Bye-law 3(*d*).

Scott: Michael George, B.A.(Oxon), D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 8 Balfour Place, St. Andrews, Fife, Scotland. Esme Gordon, W. G. Dey, J. R. McKee.

Simpson: Geoffrey Michael Thomas Graham, M.A.(Cantab.), B.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), c/o Messrs. J. Douglass Mathews & Partners, 3 Ebury Street, S.W.1. E. D. J. Mathews, A. G. Nisbet, O. D. Pearce.

Smith: Charles Adamson, D.A.(Glas.) (Glasgow Sch. of Arch.), 15 Raploch Avenue, Glasgow, W.4. Prof. W. J. Smith, A. D. Cordiner, T. S. Cordiner.

Stirling: Ronald James, D.A.(Glas.) (Glasgow Sch. of Arch.), 6 Jedburgh Gardens, Glasgow, N.W. Prof. W. J. Smith, A. G. Henderson, J. A. Coia.

Toes: Leslie Graham, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne, Sch. of Arch.), 217 Goldspink Lane, Jesmond Vale, Newcastle upon Tyne 2.

Prof. W. B. Edwards, Bruce Allsopp, F. Fielden.

Turner: John Robert, 24 Guardian Road, The Woodlands, Norwich, Norfolk. Cecil Stewart, C. J. Tomkins, Donovan Purcell.

Walls: John Finlay, A.A.Dipl.(Arch. Assoc. (London) Sch. of Arch.), 5 Dorset Road, Cheam, Surrey. A. Douglas Jones, Arthur Korn, C. K. Capon.

Watson: (Mrs.) Margaret MacBride Nairn, (Final), 2 Woodlands Drive, Glasgow, C.4. Prof. W. J. Smith, Walter Underwood, F. R. Wylie.

Webster: Norman Frederick, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 119 Horns Road, Ilford, Essex. Frank Risdon, T. E. Scott, C. G. Bath.

Williams: Rudolph, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne: Sch. of Arch.), 62 Renfrew Road, Redhouse, Sunderland, Co. Durham. Prof. W. B. Edwards, F. Fielden, J. H. Napper.

Winterbottom: Jeffrey, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.), Station House, Barnby Dun, Doncaster. Prof. Stephen Welsh, Prof. John Needham, H. B. Leighton.

Young: John Reginald Shaw, (Special Final), 71 Albert Road, Gourock, Renfrewshire. Prof. W. J. Smith, J. A. Coia, A. G. Henderson.

ELECTION: 3 FEBRUARY 1959

An election of candidates for membership will take place on 3 February 1959. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Friday, 30 January 1959.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (30)

The names of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Bartlett: Peter John, B.Arch.(Auck., N.Z.) (Passed a qualifying Exam. approved by the N.Z.I.A.), 22 Symonds Street, Auckland, C.I., New Zealand. Prof. A. C. Light, and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Beaven: Peter Jamieson (Passed a qualifying Exam. approved by the N.Z.I.A.), 53 Cathedral Square, Christchurch, New Zealand. Prof. C. R. Knight and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Borckenhagen: Carl Ludwig, B.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), 47 Glenhove Road, Melrose, Johannesburg, S. Africa. Prof. L. W. T. White, O. Pryce Lewis and applying for nomination by the Council under Bye-law 3(*d*).

Choe: Alan Fook Cheong, B.Arch.(Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 34 Tiong Poh Road, Singapore, 1, Malaya. Prof. B. B. Lewis, Mrs. Hilary Lewis, Harry Winbush.

Chuah: Yet Lian, B.Arch.(Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), 34 Market Square, Taiping, Malaya. Prof. H. Ingham Ashworth, P. J. Gordon, Prof. Denis Winston.

Duckworth: Philip Robert, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), c/o Messrs. Kyles & Kyles, 247, John Street South, Hamilton, Ontario, Canada. A. Douglas Jones, J. F. R. Gooding, R. Edmonds.

Faulkner: Douglas Peter, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne: Sch. of Arch.), Ste. 4, 1915, West Broadway, Vancouver 9, B.C., Canada. Prof. W. B. Edwards, J. H. Napper, F. Fielden.

Gargett: Peter Robertson, B.Arch. (Queensland) (Passed a qualifying Exam. approved by the R.A.I.A.), c/o Messrs. A. H. Conrad & T. B. F. Gargett, Needham House, 40 Leichhardt Street, Brisbane, Queensland. C. Fulton, J. M. Collin, T. B. F. Gargett.

Hodgen: Brian John, Dip.Arch.(Queensland) (Passed a qualifying Exam. approved by the R.A.I.A.), c/o Messrs. W. Hodgen & Hodgen, National Mutual Life Building, 190 Margaret Street, Toowoomba, Queensland, Australia. Prof. R. P. Cummings, J. M. Collin, E. J. A. Weller.

Jackson: Roland David, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), c/o P.O. Box 33, Half Way Tree, Kingston, Jamaica, West Indies. H. J. Ashwell, Alick Low, G. S. Rhodes.

Jennings: Douglas Arthur, B.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), c/o Messrs. Farrow, Stocks & Farrow, 12 St. Matthews Road, East London, Cape Province, S. Africa. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(*d*).

Joe: Kum Chuey, B.Arch.(Auck., N.Z.) (Passed a qualifying Exam. approved by the N.Z.I.A.), 186 Main Road, Upper Hutt, New Zealand. Prof. C. R. Knight. and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Kho: Tje Jam, B.Arch.(Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), Messrs. D. T. Morrow and Gordon, 129 Pitt Street, Sydney, N.S.W., Australia. Prof. H. I. Ashworth, P. J. Gordon, Prof. Denis Winston.

Koh: Kim Chuan Rex (Passed a qualifying Exam. approved by the R.A.I.A.), 88 Cross Street, Kuala Lumpur, Federation of Malaya. Prof. R. P. Cummings, F. G. Costello, T. A. L. Concannon.

Kruger: Jacob, B.Arch.(Rand.) (Passed a qualifying Exam. approved by the I.S.A.A.), 724 Libertas, Marshall Street, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3(*d*).

Lasserre: Professor Frederic, B.Arch. (Toronto), F.R.A.I.C. (Univ. of Toronto, Canada: Sch. of Arch.), 4443 West 4th Avenue, Vancouver 8, B.C., Canada. R. S. Morris, Prof. E. R. Arthur, A. J. C. Paine.

Ledaire: Lucien Robert, B.Arch.(N.U.I., Dublin) (Univ. Coll. Dublin, Ireland: Sch. of Arch.), 32 Lakefront Road, Apt. 15, Dartmouth, Nova-Scotia, Canada. Applying for nomination by the Council under Bye-law 3(*d*).

Lee: Choon Sin, B.Arch.(Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), 7 Mersing Road, Kluang, Johore, Malaya. Prof. H. Ingham Ashworth, Prof. Denis Winston. Cobden Parkes.

Martin: Peter Barry (Passed a qualifying Exam. approved by the N.Z.I.A.), 38 Hart Road, Takapuna, Auckland, New Zealand. Prof. C. R. Knight, Prof. A. C. Light and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Milne: Colin David, A.A.Dipl.(Arch. Assoc. (London): Sch. of Arch.), 3329, West 13th Avenue, Vancouver, B.C., Canada. J. H. Wade, I. B. Simpson, K. J. Sandbrook.

Morton: John Muir, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.), c/o Messrs. Bligh, Jessup, Bretnall & Partners, 445 Upper Edward Street, Brisbane, Queensland, Australia. R. M. McNaught, A. J. Hope, F. L. Halliday.

Musson: Frank William, A.A.Dipl.(Arch. Assoc.(London): Sch. of Arch.), 4389 Prospect Road, North Vancouver, British Columbia, Canada. J. H. Wade, I. B. Simpson, K. J. Sandbrook.

Ramsay: Albert, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), 92 Craighurst Avenue, Toronto, Ontario, Canada. W. S. Gauldie, T. H. Thoms, A. F. S. Wright.

Rose: Fredrick William, D.F.C. (Special Final), 169 Palsen Street, Ottawa 5, Ontario, Canada G. S. Rhodes, E. C. C. Hicks, E. M. K. Ellerton.

Rossen: (Mrs.) Vivian-Iris, B.Arch (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), c/o 612 Bryanston House, Gordon Avenue, Salisbury, S. Rhodesia. O. Pryce Lewis, C. A. Knight, C. E. Robson.

Saville: Bryan Francis, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), P.O. Box 363, Chingola, Northern Rhodesia. A. Douglas Jones, Herbert Jackson, Reginald Edmonds.

Smith: Frederick John Ridley, B.Arch. (Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), 23 Pearson Avenue, Gordon, N.S.W., Australia. Prof. H. Ingham Ashworth, J. C. Fowell, J. L. S. Mansfield.

Stewart: Robert Walter, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne: Sch. of Arch.). 4805 Commercial Drive, Vancouver 12, B.C., Canada. Prof. W. B. Edwards, J. H. Napper, F. Fielden.

Tennekoon: Panini (Passed a qualifying Exam. approved by the R.A.I.A.), 38 Frankfort Place, Bambalapitiya, Colombo 4, Ceylon. Prof. B. B. Lewis, Mrs. Hilary Lewis, R. G. Parker.

Yawitch: Boris, B.Arch.(Rand.) (Passed a qualifying Exam. approved by the I.S.A.A.), 724, Libertas, Marshall Street, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3(*d*).

Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENT

Mr. Victor G. Bartholomew, A.M.T.P.I. [*A*] has resigned his appointment as Principal Assistant Architect/Planner with the West Ham County Borough Council to take up the post of Deputy Chief Architect/Planner to the Basildon Development Corporation.

PRACTICES AND PARTNERSHIPS

The partnership between **Mr. S. P. Anderson** [*F*] and **Mr. R. W. Eglinton** [*L*] has been dissolved by mutual consent. Mr. Eglinton will continue the practice under the style of **Anderson and Eglinton** at 20A Eden Street, Kingston-upon-Thames.

Architects' Co-Partnership, of 44 Charlotte Street, W.1, have taken **Mr. Ralph Wilkinson** [*A*] into associate partnership.

Mr. Graham Dawbarn, C.B.E. [*F*], who, with the late **Sir Nigel Norman,** founded the firm of **Norman and Dawbarn** in 1933, relinquished his partnership on 30 September 1958. He has become Adviser to the firm which will be carried on under the same name by the remaining partners (**R. F. Lloyd Jones, Alick Low** [*F*], **Herbert Wilson, Walton H. Lindsay** [*A*] and **Greville Rhodes** [*F*]).

Mr. Norman Godsmark [*A*] has taken into partnership **Mr. Alan Miller-Williams** [*A*] under the style of **Godsmark and Miller-Williams.** The address and telephone number will remain 37a Tubwell Row, Darlington (Darlington 4932).

The name of the firm of **W. Curtis Green, R.A., Son and Lloyd,** of which **Mr. W. Curtis**

Green, R.A. [*Retd. F*], was formerly a partner, has been changed to **Green, Lloyd and Son.** The partners are **Mr. Christopher Green** [*F*], **Mr. W. Antony S. Lloyd** [*F*], and **Mr. J. Sampson Lloyd** [*A*], and the practice will be continued at 5 Pickering Place, St. James's Street, S.W.1 (Whitehall 8926–7–8).

Mr. Alan H. Greenhalgh [*A*] has relinquished his appointment as Architect to the Malton Rural District Council and has commenced practice with his wife, **Mrs. Betty D. Greenhalgh** [*A*], under the title of **A. H. and B. D. Greenhalgh,** at 57 Market Place, Malton (Malton 933), where they will be pleased to receive trade literature.

Miss Hermione Martin [*A*] has started private practice at 12–15 Great Turnstile, Lincoln's Inn Fields, W.C.1 (Holborn 6377).

Messrs. Richard Sheppard and Partners [*F/A*] will in future practise as **Richard Sheppard, Robson and Partners.** Their address will remain 5 Southampton Place, W.C.1 (Chancery 4261–5).

The firms of **Messrs. G. Gordon Stanham,** of 9/10 Fenchurch Street, E.C.3, and **Messrs. Adamson, Gray and Adamson,** of 11 Portman Street, Portman Square, W.1, have been amalgamated and will practise under the name of **G. Gordon Stanham, Adamson, Gray and Partners,** at 9/10 Fenchurch Street, with a branch at Dinton, Bucks, as from Monday 1 September 1958. **Mr. Colin S. Campbell** [*A*], who has been an assistant with Messrs. G. Gordon Stanham, has been taken into partnership and the partners will now be **Messrs. H. G. Stanham,** T.D., F.R.I.C.S. [*F*], **A. F. G. Stanham,** F.R.I.C.S. [*F*], **J. E. Adamson,** D.S.O., O.B.E. [*L*], **Andrew L. Gray** [*F*], **D. M. B. White** [*A*] and **C. S. Campbell** [*A*].

Following the death of **Mr. W. James Venables**[*L*], the practice of **Messrs. Venables and Williams** has been taken over by the surviving partner, **Mr. C. Liddell Williams** [*A*], who is continuing the practice in partnership with **Mr. Gordon A. Ball** [*A*] under the style of **Venables, Williams and Ball** at West Road, Congleton, Cheshire (Congleton 2003).

CHANGE OF NAME

Miss Caroline Harding [*A*] has changed her name to **Mrs. Caroline Oboussier** and is practising from Crossways, Market Lavington, Nr. Devizes, Wilts.

CHANGES OF ADDRESS

Mr. R. T. Akers [*L*] has changed his address to 219 Arundel Road, Peacehaven, Sussex (Peacehaven 3422).

Mr. Geoffrey E. Brimilcombe [*A*] has changed his address to 109 Hornbeams, Harlow, Essex.

Mr. Edward John Hugh Cawdron [*A*] has changed his address from 4a Crescent Way, Orpington, Kent, to **19a** Crescent Way.

Mr. Alfred A. Coutts [*A*] has changed his address to Cumbernauld Development Corporation, Cumbernauld House, Cumbernauld, By Glasgow.

Mr. H. G. Eisner [*A*] has changed his address to 4 The Close, near Hurds Hollow, Matlock, Derbyshire.

Mr. Peter P. Gibbons [*A*] has changed his address to Messrs. James W. Ferrie and Partners, China Insurance Building, 174 Batu Road, Kuala Lumpur, Malaya.

Mr. Alan Fitch [*A*] will be on leave from Hong Kong from 5 December 1958 to 5 July 1959. His address in the U.K. during this period will be c/o Mrs. F. W. Ford, 4 Upper Hamilton Road, Brighton, Sussex.

Messrs. Philip B. Herbert and Partner [*A.A*] have moved to new premises at Fentham Road, Hampton-in-Arden, Solihull, Warwickshire (Hampton-in-Arden 561–2).

Mr. J. Brian Jones [*A*] has changed his address to c/o Ellie Middleton, Esq., Central Chambers, 1 Norfolk Street, King's Lynn.

Mr. Kenneth S. Long [*A*] has changed his address to c/o the Architects Department, Tema Development Corporation, Tema, Accra, Ghana, West Africa.

Mr. Leslie F. Longshaw [*A*] has changed his address to 49 Beverley Gardens, Wembley Park, Middlesex (Arnold 7280).

Mr. John McNicol [*A*] has changed his office address to 64 Moorlands, Welwyn Garden City, Herts, where he will continue to practise as a Town and Country Planning Consultant, and in the survey of historic buildings.

Mr. Edward Marshall [*A*] has changed his address to Flat 2, 129 Hamilton Terrace, N.W.8 (Maida Vale 7587).

Messrs. Mather and Nutter [*A/A*] have changed their address to Canada House, 3 Chepstow Street, Manchester, 1 (Central 6061 and 3758).

Mr. R. H. Morfitt [*A*] has changed his address to 38 Queens Way, Cottingham, E. Yorkshire.

The **School of Architecture and Building, Oxford,** has removed to the new building of the College of Technology, Art and Commerce at Headington Road, Oxford. The Technical Reference Library and the Materials Room are being reorganised, and the Lecturer in Construction, Mr. R. E. Owen [*A*], would be glad to receive samples and trade catalogues, preferably in duplicate.

Mr. Hugh F. Rivers [*A*] has changed his address to 40 Stanhope Grove, Camberwell, E.6, Victoria, Australia.

Mr. S. P. Sartain [*F*] has changed his address to 1 Raleigh House, Ditton Close, Thames Ditton, Surrey.

Mr. F. I. Shackleton [*A*] has changed his address to D.P.W., Hunter Building, Ottawa, Ontario, Canada.

Mr. Alun A. Thomas [*A*] has changed his address to 10 Culmington Road, South Croydon, Surrey.

Mr. G. W. Wilkie [*A*], has changed his address to The Queen's Park Hotel, Port-of-Spain, Trinidad, West Indies, where he will be pleased to receive trade literature.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate (36), with nine years' varied experience in private practice, requires partnership, or responsible post leading shortly to partnership, in progressive office. South of England preferred. Capital available. Box 77, c/o Secretary, R.I.B.A.

Fellow wishes to acquire established general practice North, West, or East Riding of Yorks. Some capital available. Box 95, c/o Secretary, R.I.B.A.

Associate, 30 years' experience, with small practice in Midlands, seeks small, well established practice in Oxford or S.-S.W. Counties. Would prefer an arrangement whereby the principal, contemplating retirement, would remain for a period. Small capital available. Box 99, c/o Secretary, R.I.B.A.

Associate wishes to dispose of well established brewery and general practice in the North West Midlands area. Small staff and well equipped office premises on lease. Gross fees over £7,000 per annum. Box 100, c/o Secretary, R.I.B.A.

Associate (38), of considerable general experience, seeks partnership or responsible position leading thereto in London office. Some capital available. Box 101, c/o Secretary, R.I.B.A.

Associate, A.A.Dipl., 20 years' varied experience, good social background and contacts, wants wider scope for these qualifications than his present position offers. Would welcome a post in London or the Home Counties with a view to partnership. Some capital available. Box 103, c/o Secretary, R.I.B.A.

Birmingham architects, with small busy practice and good connections, seek amalgamation with a similar or larger firm. Box 105, c/o Secretary, R.I.B.A.

Associate (38), with Cambridge degree, 11 years' experience in private practice, capital available, private clients and large personal appointment, seeks partnership in London or Surrey firm. Box 106, c/o Secretary, R.I.B.A.

For sale in West Country town established practice with freehold offices and house. Going abroad. Box 109, c/o Secretary, R.I.B.A.

Member (41), 16 years' varied experience, wishes to contact member with small practice in the Southampton or Portsmouth district with a view either to partnership or of taking over practice on retirement. Capital available. Box 110, c/o Secretary, R.I.B.A.

Member, in own practice for 12 years, desires partnership in small general practice. Experienced in design and administration of a wide variety of work. Some capital available. Or would render assistance in own office. Box 111, c/o Secretary, R.I.B.A.

WANTED AND FOR SALE

Wanted. Copies of Guadet's *Eléments et Théorie de l'Architecture* published by 'La Construction Moderne', Paris 1923 (four vols.), Tony Garnier's *Une Cité Industrielle*, published by A. Vincent, Paris 1917, and *Les Grands Travaux de la Ville de Lyon*, published by Ch. Massin, Paris 1919. State condition and price required. Box 102, c/o Secretary, R.I.B.A.

For sale. 4 in. Theodolite, by Stanley, in case (no tripod or staff). £30 or nearest. Box 104, c/o Secretary, R.I.B.A.

For sale. In good condition. One plan chest, oak, 3 ft. by 4 ft. by 3 ft. high, with eight drawers—£12. One plan chest, pine, 3 ft. 6 in. by 4 ft. 3 in. by 2 ft. 9 in. high, four long drawers and four smaller drawers, lino top—£10. One drawing stand, sloped top, 4 ft. by 2 ft. 6 in.—£2. Box 107, c/o Secretary, R.I.B.A.

ACCOMMODATION

Member with surplus office space would be willing to share with a firm of architects or surveyors requiring small branch or accommodation address in South Hampshire. Full office facilities available. Box 108, c/o Secretary, R.I.B.A.

The Royal Institute of British Architects, as a body, is not responsible for statements made or opinions expressed in the JOURNAL.

LOANS FOR HOUSE PURCHASE

The funds available in this connection continue to be restricted. With the prospect, however, of further resources becoming available through this Agency, inquiries are invited for loans required during the coming months.

Within the limits of the money available applications will be considered in respect of Modern Houses and Bungalows of traditional construction required for owner occupation.

Inquiries should be addressed to:—

The Manager,
A.B.S. Insurance Agency, Ltd.,
66, Portland Place,
London, W.1.
(Telephone: Langham 5533.)

Superlatable! Inimitive!

'These underworld clubs are somewhat sordid,' said Baron Rabbit, 'but the music is good.'

'Dig that crazy rhythm!' said the tourist.

'Which brings me,' replied the Baron, 'to those pipes which the drummer is belabouring. They are undoubtedly vitrified clay pipes—the kind of sewer pipes people never do have to dig up again.'

'You mean, the ones that stay down so long they save the surface people lots of money?'

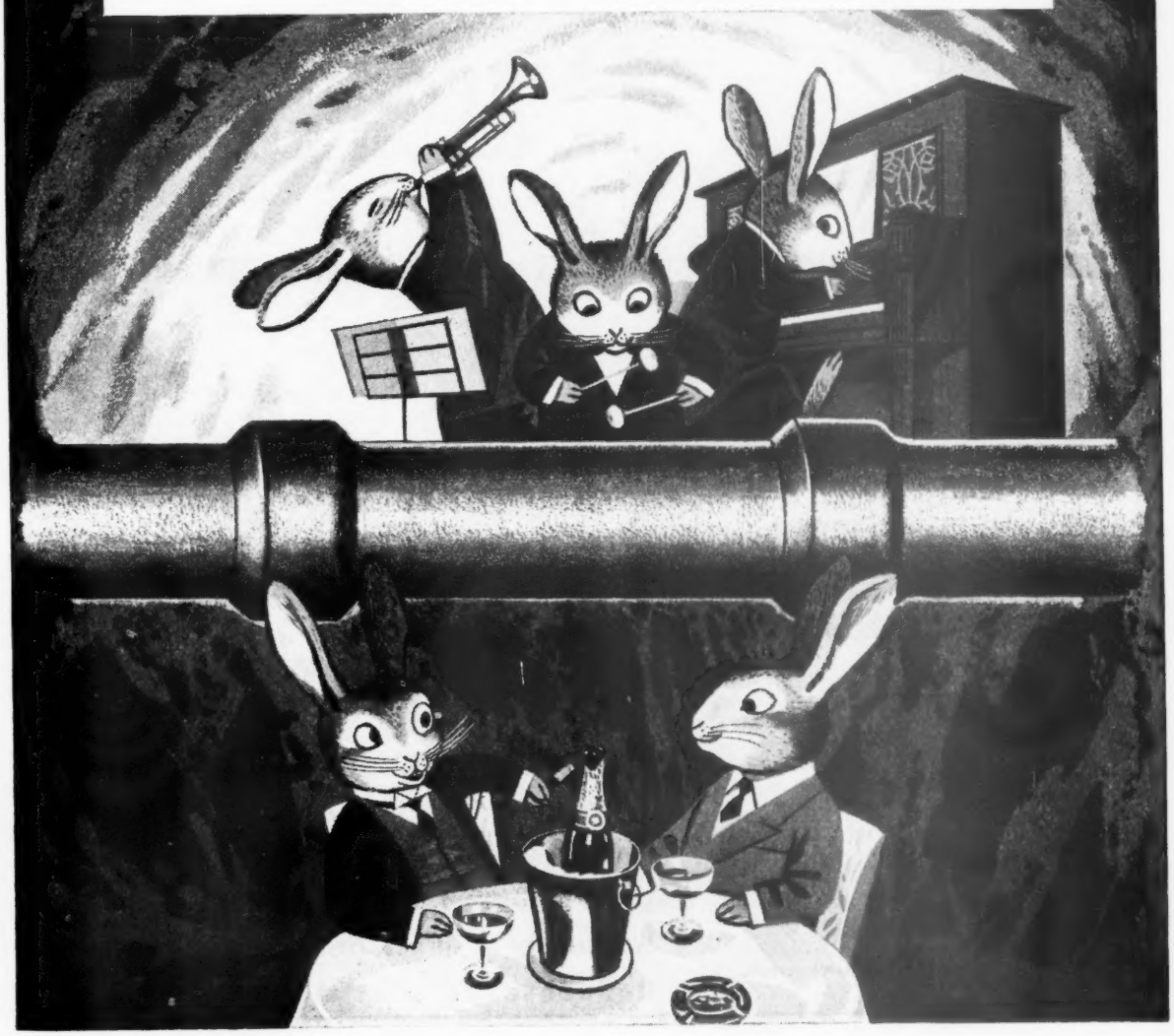
'Yes,' said the Baron. 'Smooth, tough, acid-resisting pipes; they beat the band.'

'Salt glazed vitrified clay pipes are really superlatable,' said the tourist.

'Salt glazed vitrified clay pipes are truly inimitive!' said the Baron.

Put down Salt Glazed Vitrified Clay Pipes and Conduits—they stay down for centuries!

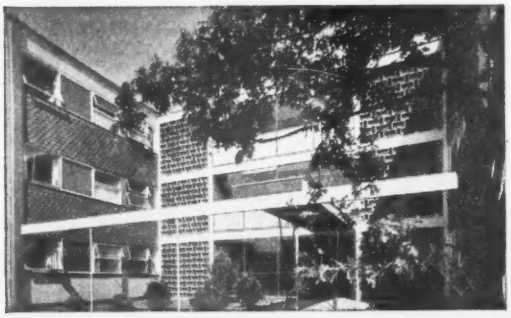
NATIONAL SALT GLAZED PIPE MANUFACTURERS' ASSOCIATION





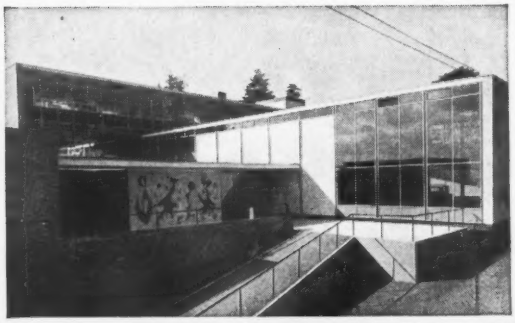
Babcock House, Euston Road, London.
Architects: Waterhouse & Ripley, F.R.I.B.A.
Main Contractors: Holland & Hannen and Cubitts Ltd.

leading



Flats at Parkley's, Ham Common.
Architect: Eric Lyons, F.R.I.B.A.
Main Contractors: Wates Ltd.

architects



Fairlawn Primary School, Lewisham, for the London County Council.
Architect: Peter Moro, F.R.I.B.A.
Main Contractors: E. H. Smith (Croydon) Ltd.

chose

THERMALITE-YTONG

Load bearing insulating building blocks

Thermal insulation · Load bearing
High speed of laying · Light weight
Workability · Direct fixing · Fire resistance
Reduces the risk of condensation

For further details and technical data apply to

THERMALITE LIMITED
Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire.
Telephone: Coleshill 2081.



G.E.C.

LIGHTING SHOWROOMS

Where distinctive fittings and discriminating clients can meet

Here, displayed in ideal conditions, are the many ranges of G.E.C. lighting fittings—a new and exciting experience for you and your clients. Bring your clients, or send them along and we will look after them for you. Similar facilities await you at the Company's Branches throughout the world.

THE GENERAL ELECTRIC CO. LTD · MAGNET HOUSE · KINGSWAY · LONDON · W.C.2



WALCRETE MASONRY CEMENT

— YET ANOTHER PRODUCT DEVISED BY BLUE CIRCLE RESEARCH SCIENTISTS

to save you time, money and labour

Only suitable sand and water are required with Walcrete to produce a perfect mortar of uniform character and consistency.

IT HAS HIGH SAND-CARRYING CAPACITY WHICH PRODUCES A CHEAPER MORTAR

Walcrete is made under rigid laboratory control to Blue Circle standards. The materials used in its composition are accurately proportioned and intimately mixed-in during manufacture: thus there are none of the risks usually met with when mixing additives on the site.

Walcrete gives a mortar with these properties:

★ *Excellent plasticity and workability* ★ *Low shrinkage & moisture movement*
★ *Higher resistance to sulphates than conventional mortars* ★ *Excellent cohesiveness*
★ *Frost resistance* ★ *Good water retentivity*

A BLUE CIRCLE PRODUCT

Write for further details and prices to:
THE CEMENT MARKETING COMPANY LIMITED
PORTLAND HOUSE, TOTHILL STREET, LONDON, S.W.1
G. & T. EARLE LIMITED HULL
THE SOUTH WALES PORTLAND CEMENT & LIME CO. LTD., PENARTH, GLAM.

The London Planetarium,
Marylebone Road, London N.W.1.
for Madame Tussauds Ltd.

Photograph: "The Builder" Newspaper.

Architect:
George Watt A.R.I.B.A.

General Contractors:
A. J. Wait & Co. Ltd.



GYPROC AT ST. MARYLEBONE

...achieved at a practical cost, excellent sound absorption and fire protection together with a high level of appearance in the London Planetarium

USING GYPROC ACOUSTIC PRODUCTS

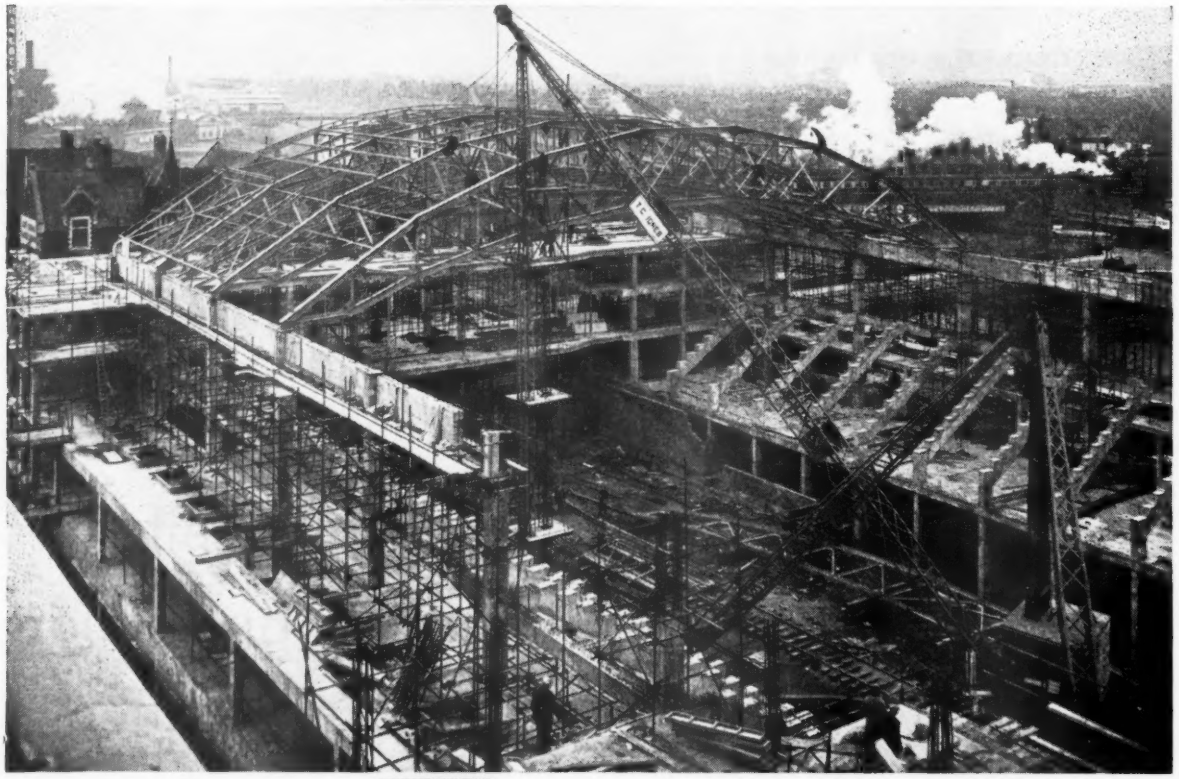
These 2ft. square, attractive bevel-edged tiles are high quality precision products. The slots which are the distinctive feature of the tile have been designed to provide optimum sound absorption when used with a suitable porous backing. As the tiles are manufactured from ½" thick gypsum plasterboard there is a high measure of fire protection. The tiles themselves present pleasant decorative elements. The slots and the 45° bevels on all face edges supplement a decorative scheme. All facts on sound absorption co-efficients, fire resisting characteristics, and methods of fixing, will be sent on request. Write for leaflet RP.361

GYPROC PRODUCTS LIMITED

Head Office: Singlewell Road, Gravesend, Kent. *Gravesend 4251/4*
Glasgow Office: Gyproc Wharf, Shieldhall, Glasgow S.W.1. *Govan 2141/3*
Midland Sales Office: 11 Musters Road, West Bridgford, Nottingham. *Nottingham 82101*
London Office: Bath House, 82 Piccadilly, London W.1. *Grosvenor 4617/9* S AG.5

STEELWORK

For the 1958 Empire Games Pool at Cardiff



A general view of the structure showing some of the 140 ft. roof trusses.

Architects : E. C. ROBERTS, M.ENG., M.I.C.E., M.I.MUN.E., M.T.P.I., A.R.I.C.S., CARDIFF CITY SURVEYOR, JOHN DRYBURGH, A.R.I.B.A., A.R.I.C.S., A.M.T.P.I., CITY ARCHITECT
in consultation with
SIR PERCY THOMAS & SON
Consulting Engineers :
OSCAR FABER & PARTNERS
General Contractors :
DAVIES, MIDDLETON & DAVIES LTD.

FABRICATED AND ERECTED BY

T. C. JONES & CO. LTD.

THE 600 GROUP OF COMPANIES

STRUCTURAL ENGINEERS

Wood Lane, London, W.12. Tel: Shepherds Bush 2020

South Wales Office : Bute Street, Cardiff. Tel : 28786

Works : Shepherds Bush, London. Neasden, Middx.

Treorchy, Glamorgan

For Interior Walls

A MULTICOLOUR-FLECKED FINISH FROM ONE TIN OF

POLICROME

Producing a multicolour-flecked pattern from one tin of material, POLICROME opens up an exciting new range of decorative treatments which fully justify its claim to be 'not just a paint, but a system of decoration.'

The range of 17 POLICROME patterns provides an attractive and appropriate finish for almost all classes of buildings, including banks, offices, stores, shops, cinemas, theatres, schools and other public buildings.



International Paints Ltd.

GROSVENOR GARDENS HOUSE, LONDON, S.W.1

TELEPHONE: TATE GALLERY 7070 (15 LINES)

Also: BIRMINGHAM · BELFAST · CARDIFF · GLASGOW
LEEDS · LIVERPOOL · NEWCASTLE · SOUTHAMPTON

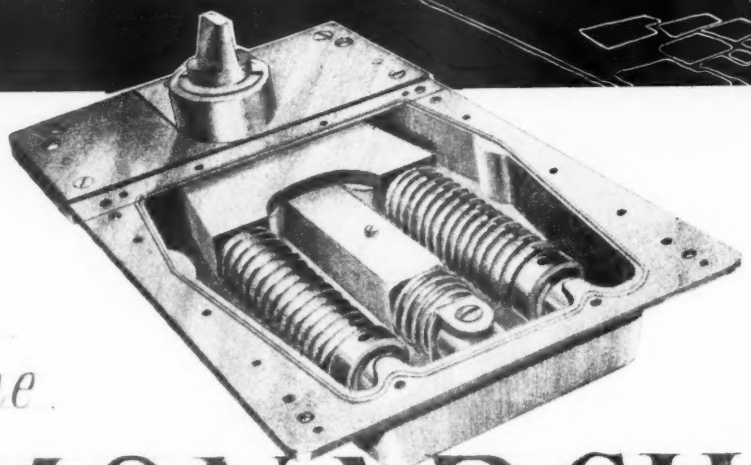
REGISTERED TRADE MARK

MAIN FACTORY IN U.K.—FELLING-ON-TYNE

ASSOCIATED FACTORIES IN

AUSTRALIA	MELBOURNE	FRANCE	ROUEN	NEW ZEALAND	AUCKLAND
AUSTRALIA	SYDNEY	GERMANY	HAMBURG	NEW ZEALAND	WELLINGTON
BRAZIL	RIO DE JANEIRO	HOLLAND	ROTTERDAM	SPAIN	BILBAO
CANADA	MONTREAL	ITALY	GENOA	SWEDEN	GOTHENBURG
CANADA	VANCOUVER	ITALY	TRIESTE	U.S.A.	NEW YORK
DENMARK	COPENHAGEN	MEXICO	MEXICO CITY	U.S.A.	SAN FRANCISCO
FRANCE	LE HAVRE	NORWAY	BERGEN	VENEZUELA	MARACAIBO





The

MONARCH

Floor Spring

Established over 200 years

SEE OUR EXHIBITION AT THE BUILDING CENTRE, 26, STORE ST. W.C.1.

WILLIAM NEWMAN & SONS LTD.

HOSPITAL STREET, BIRMINGHAM 19



. . there's no delay

when you specify..

T&M

Structural Steelwork for Industrial buildings

Enquiries invited for all types of medium and light Constructional Steelwork. Our Technical Staff are available at all times for consultation, and promptitude in completion is guaranteed with all contracts

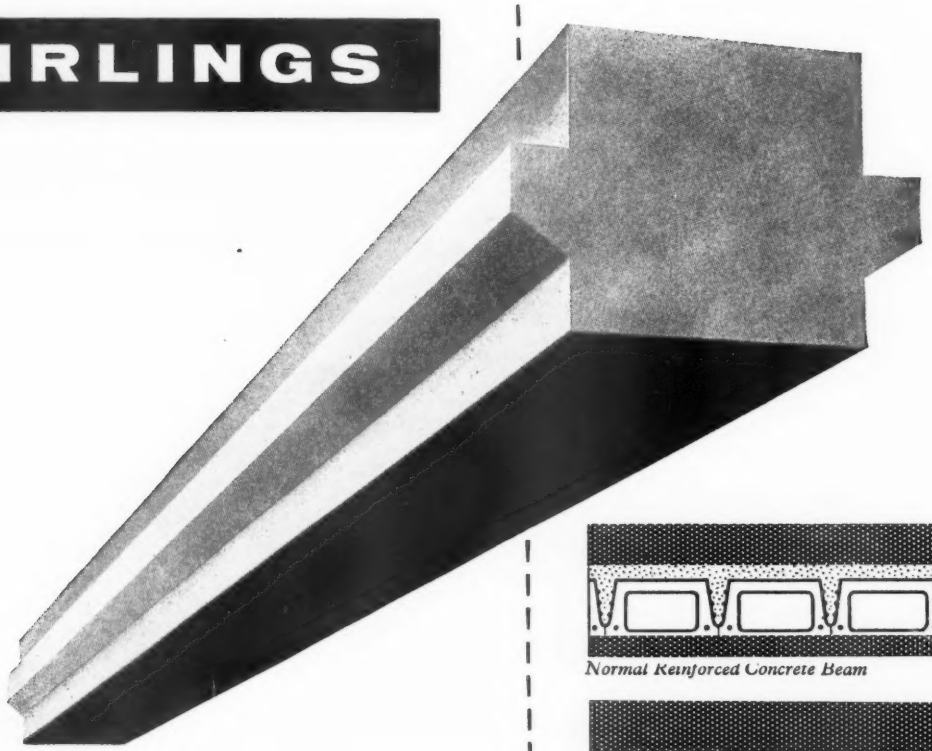


TEASDALE & METCALFE LTD
NORTH STREET · WETHERBY · YORKSHIRE
Telephone: WETHERBY 2701/2

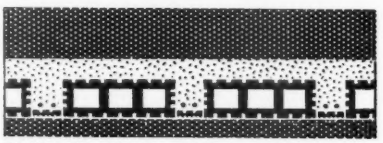
For ROOFS or FLOORS consult

GIRLINGS

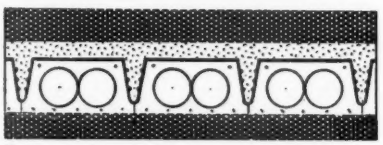
By Appointment
Suppliers of Ferro-Concrete
to the late King George VI



Normal Reinforced Concrete Beam



Hollow Tile Reinforced Concrete Floors

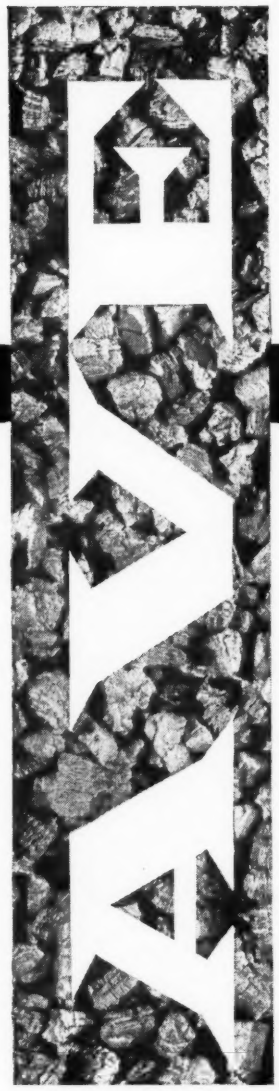


Prestressed Reinforced Concrete Beam

Regard Girling's Advisory Service as *your* service. Any time you have a problem relating to Flooring or Roofing, our technical representatives will gladly call on you, at your bidding. They will be only too pleased to describe to you the relative merits, in relation to any given circumstances, of reinforced concrete beams, prestressed concrete beams, and hollow tile reinforced concrete floors. Last (but by no means least) we shall be happy to supply the concrete answer to solve your problem.

GIRLINGS FERRO-CONCRETE CO LIMITED

SOUTH: Great South West Road · Feltham · Middlesex — **Telephone: Hounslow 1158**
MIDLANDS: Rothwell · Nr. Leeds — **Telephone: Rothwell 3174 (Leeds Extension)**
SCOTLAND: Southbank Road · Kirkintilloch · Glasgow — **Telephone: Kirkintilloch 2244–5**



results have proved that

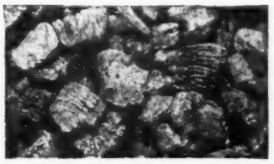
VERMICULITE

provides better thermal insulation efficiency—for no extra cost—than any other material

Roof screeds · Floor screeds · Loose fill · Plaster

Specify one of these branded A.V.E. *vermiculites.*

ASSOCIATION OF AVE VERMICULITE EXFOLIATORS



Full technical information from

J. M. & J. Bartlett Ltd
Lombard House
Warwick Street
NEWCASTLE UPON TYNE 2

Cape Building Products Ltd
114–116 Park Street
LONDON W1
Cowley Bridge Works
UXBRIDGE Middlesex

A. R. & W. Cleaver Ltd
Advance Works
Wood Street
NORTHAMPTON

Dupre Vermiculite Ltd
39–41 New Broad Street
LONDON EC2
23b Broadwater Road
WELWYN GARDEN CITY Herts

The Iron & Marble Company Ltd
33–35 Victoria Street
BRISTOL

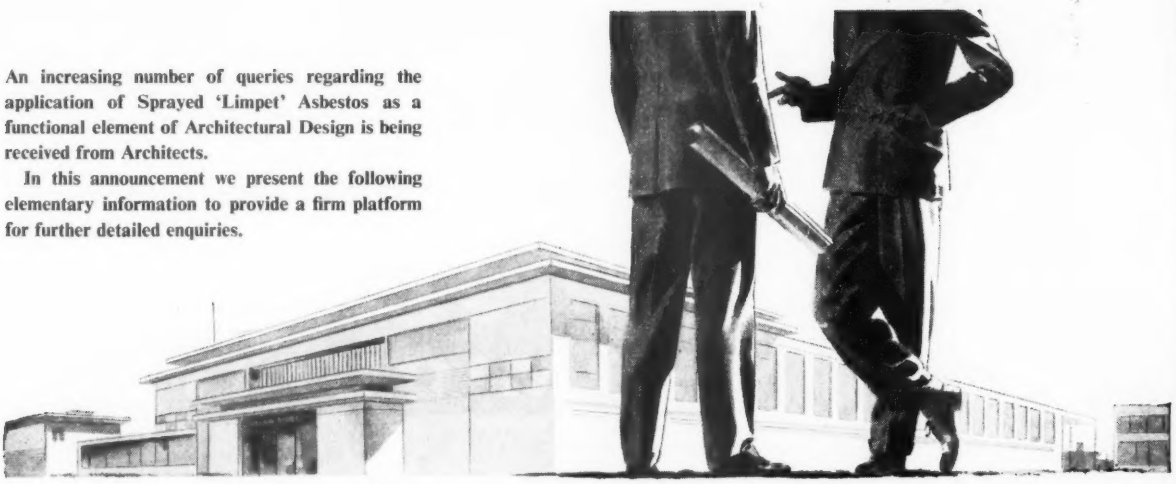
William Kenyon & Sons (MetaMica) Ltd
DUKINFIELD Cheshire
140 West George Street GLASGOW C2
50 Bloomsbury Street
Bedford Square LONDON WC1

L. Slack & Son Ltd
Courthouse Street
Pontypridd
SOUTH WALES

Issued in the interest of better insulation by the ***Association of Vermiculite Exfoliators****, 51-55 Strand, London W.C.2*

An increasing number of queries regarding the application of Sprayed 'Limpet' Asbestos as a functional element of Architectural Design is being received from Architects.

In this announcement we present the following elementary information to provide a firm platform for further detailed enquiries.



an architect asks questions about Sprayed 'Limpet' Asbestos by NEWALLS

REGD.



"What do you consider is the major advantage of Sprayed 'Limpet' Asbestos?"

Probably the most important element is that the 'Limpet' process gives intimate surface contact, sealing all joints, covering rivets, irregularities and protrusions in a continuous coat that entirely eliminates air spaces—a significant factor in itself.



"I understand that Sprayed 'Limpet' Asbestos has two insulating properties?"

Correct. In addition to providing a high degree of thermal insulation, it is an excellent material for absorbing sound. Indeed, many firms have specified the process for correcting acoustic distortions alone.



"Being largely Asbestos, I suppose the process gives a measure of fire protection?"

Most certainly! Again, it is often used solely because of its fireproofing properties. In fact, this method was the first to be approved for Class A fireproofing of ships under the 1948 Convention.



"Being porous, isn't the treatment liable to premature rotting where condensation exists?"

On the contrary. Asbestos is chemically inert. It is rotproof, verminproof and undamaged by water. Condensation is diffused preventing dripping and allowing for speedy re-evaporation to the atmosphere from the warm surface of the coating.



"It seems too versatile for words. It's a Thermal and Acoustic Insulant, rotproof and verminproof, fire-resistant, prevents condensation, resists vibration... anything else?"

Well. It has been used extensively purely as an anti-corrosion measure on metals subject to severe corrosive conditions, but we'd have to know the particular application you had in mind to give our full recommendations.



"Naturally. And if we did want Thermal and Acoustic Insulation—and Fire protection in one coating—I suppose it would cost the earth?"

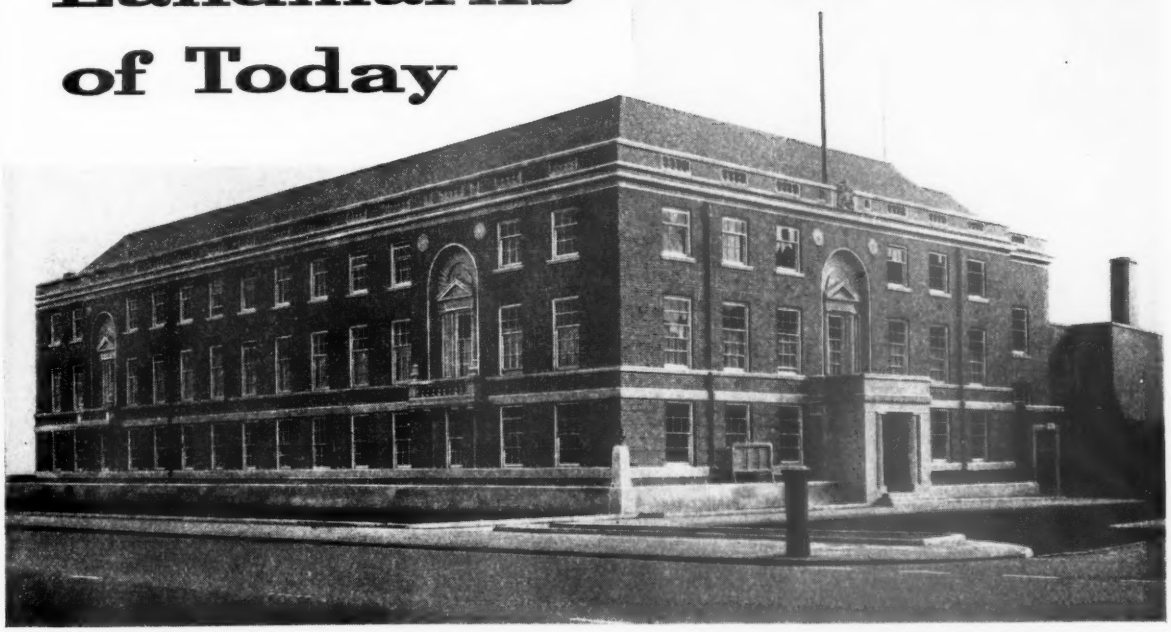
Frankly—no. You see, the erection of timber grounds is not necessary. In application there is no cutting to waste, and the density and thickness is controllable to a very fine degree by highly efficient operators. It compares favourably with conventional insulation methods and materials.

Sprayed 'Limpet' Asbestos is a particularly suitable multi-purpose insulant in schools, public buildings and the like. Our considerable experience in this field will be gladly placed at your disposal.

Newalls

NEWALLS INSULATION CO. LTD.
HEAD OFFICE: **WASHINGTON, CO. DURHAM**
A member of the TURNER & NEWALL ORGANISATION
Offices and Depots at LONDON, GLASGOW, MANCHESTER, NEWCASTLE UPON TYNE, BIRMINGHAM, BELFAST, BRISTOL & CARDIFF

Landmarks of Today

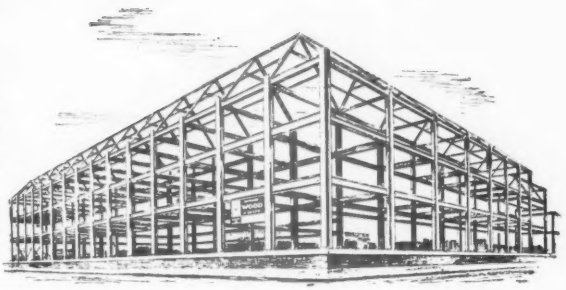


Architects and Surveyors, Bradshaw Gass & Hope, FF.R.I.B.A.

EDWARD WOOD & CO LTD

CONSTRUCTIONAL ENGINEERS

The new Headquarters building for the Salford City Police is a fine example of modern construction. The strength of the force can be compared with the solidity of this building for which we fabricated and erected the steelwork to the design of Bradshaw Gass & Hope, FF.R.I.B.A.



Registered Office and Works : *Telephone : TRAfford Park 2341 (10 lines)*

OCEAN IRONWORKS · TRAFFORD PARK · MANCHESTER 17

London Office : 68 Victoria Street, S.W.1. Telephone : VICtoria 1331/2 · Technical Offices at Birmingham and Nottingham

dm WD 73



The brilliant whites and
beautiful tints of modern products
depend on TIOXIDE
TITANIUM OXIDE . . .
finest white pigment in the world!

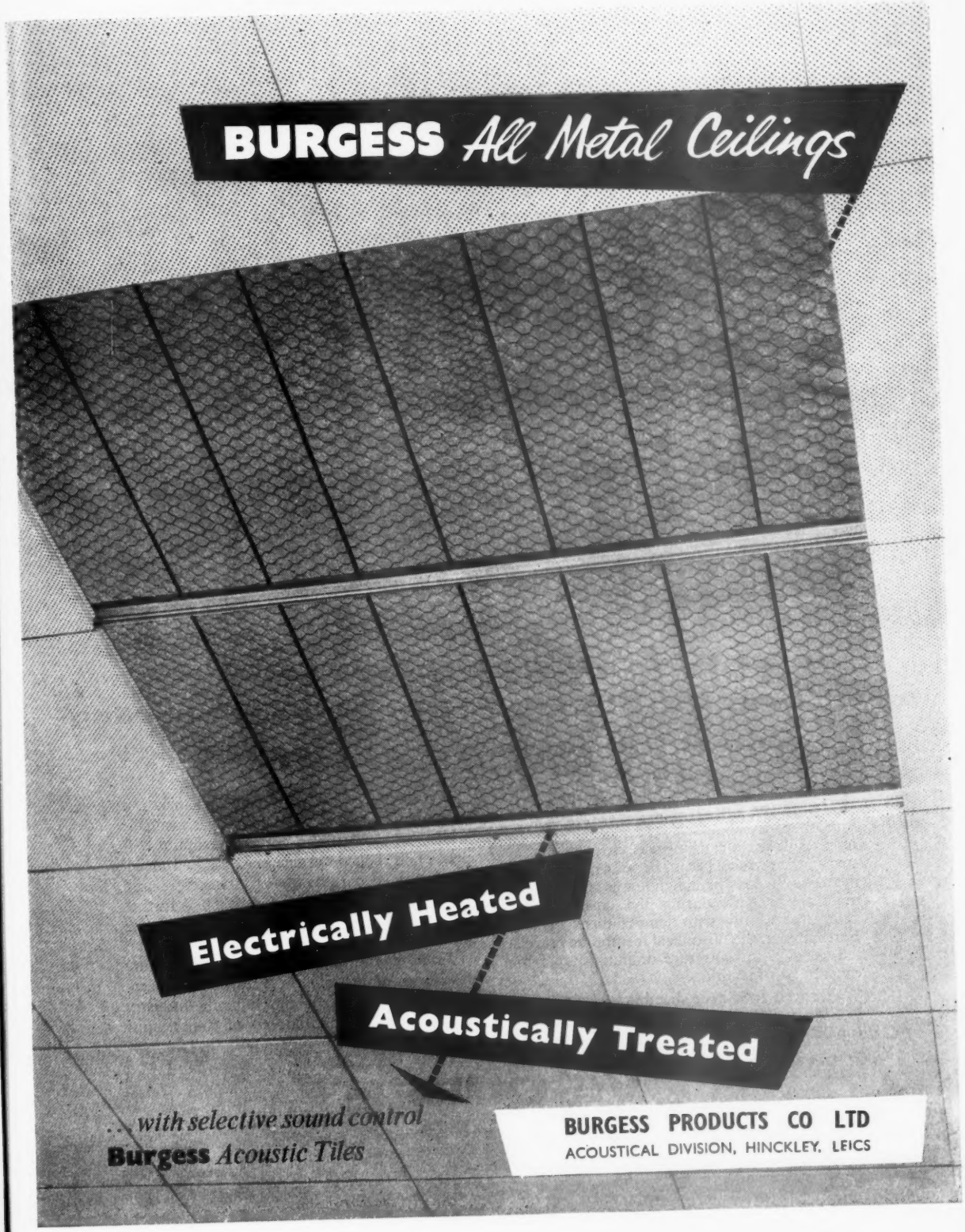
58-1A

B T P
TITANIUM
PIGMENTS

BRITISH TITAN PRODUCTS COMPANY LIMITED 10 Stratton Street London W.1






BURGESS All Metal Ceilings
Electrically Heated
Acoustically Treated
. . . with selective sound control
Burgess Acoustic Tiles
BURGESS PRODUCTS CO LTD
ACOUSTICAL DIVISION, HINCKLEY, LEICS



'Visqueen' being laid under the runway of the Gatwick Development Project. Consulting Engineers: Frederick S. Snow and Partners; Contractors: Sir Alfred McAlpine & Sons Limited.

Under the runway and roads at Gatwick Airport there's VISQUEEN polythene sheeting– almost ¾-million square yards of it!

'VISQUEEN' was the polythene sheeting used under the runway and roads at Gatwick Airport as a separation and slip membrane. As a result stress cracking was virtually eliminated in the top slab because it was not keyed to the base. The paving concrete was able to move more freely both during the curing period and subsequently with temperature changes. Furthermore, the 'Visqueen' membrane prevented the fats and moisture draining out of the concrete during curing.

'Visqueen' polythene sheeting is also resistant to acids and alkalis. For this reason it will protect concrete slabs from attack by acidic sub-soil.

The light weight of 'Visqueen' makes it exceptionally easy to handle and it is available in very wide widths to ensure maximum efficiency and reduce wastage in overlaps. Indeed, at Gatwick Airport, widths of 15 feet were used which were specially made for the job. A further feature of 'Visqueen' is its efficiency as a water and water vapour barrier.

Write to the address below for literature describing more fully the uses of 'Visqueen' polythene sheeting in the building industry and for the name and address of your nearest stockist.

VISQUEEN

the builder's polythene sheeting

BRITISH VISQUEEN LIMITED · STEVENAGE · HERTS · 'Phone: Stevenage 1310

A subsidiary company of Imperial Chemical Industries Limited

BV. 112

CANADIAN TIMBER

...from Canada's vast forests a wood for almost every need!



CANADIAN WESTERN RED CEDAR

Special Properties

Immune to dry rot
Very resistant to decay
Little shrinkage
Attractive natural colour

Typical Uses

Exterior cladding
Agricultural buildings
Boat construction
Shingles

For further information on Canadian Woods, contact: Commercial Counsellor (Timber), Canada House, London, S.W.1.



Pyrodek

Trade Mark

poured in place gypsum concrete roof

An entirely new lightweight roof construction in which Gypsum Concrete is poured into place to a depth of 2 in. on bulb tee sections, form board and reinforcing fabric to form an incombustible roof economical for areas of over 500 square yards.

VERSATILE CONSTRUCTION

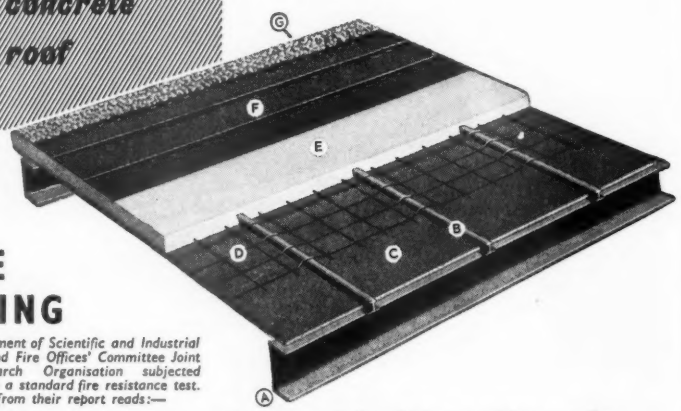
The system permits versatile design and can be adapted for use whether the supporting structural frame is steel or reinforced concrete, or whether the roof is flat, low pitched or curved.

HIGH SPEED CONSTRUCTION

The Gypsum is pumped into place from an automatic gauging and pumping equipment sited at ground level which enables up to 1000 square yards of Gypsum to be poured in one day. The set of Gypsum concrete is approx. 15 minutes after pouring and the roof will take light roof traffic after 1 hour.

1000 square yards of Pyrodek was specified for Maville Works, Nottingham, after it was gutted by fire. The building, which was modified from pitched to flat roof design, was re-roofed by ten men in ten working days including laying steel-work and formboard thus assisting in the early reoccupation of the building.

Ⓐ *Purlin.*
Ⓑ *Bulb tees.*
Ⓒ *Formboard.*
Ⓓ *Galvanised reinforcing fabric.*
Ⓔ *Pyrodek gypsum concrete.*
Ⓕ *Built-up roofing.*
Ⓖ *Gravel finish.*



FIRE RATING

The Department of Scientific and Industrial Research and Fire Offices' Committee Joint Fire Research Organisation subjected 'Pyrodek' to a standard fire resistance test. An extract from their report reads:—

'A "Pyrodek" gypsum concrete roof approx. 3 inches thick was subject to a fire resistance test in which the soffit was exposed to the heating conditions specified in British Standard 476: Part 1. The specimen roof provided a barrier to the passage of fire for 2 hours 15 minutes when tested without imposed load on its upper surface. No collapse occurred, no cracks and holes formed through the specimen and the insulation provided by the deck prevented ignition of the bitumen on its top surface. The roof therefore provided fire resistance of the 2-hour grade.'



D. ANDERSON & SON LIMITED

STRETFORD, MANCHESTER
Telephone: LONgford 4444

OLD FORD, LONDON, E.3
Telephone: AMHerst 9381

JN/P58



CAESAR IMP:

knew a thing or two...

and one of the things that he knew was the need for good roads to link his garrisons in Britain. For the time, the straight, well paved, solidly constructed Roman roads were masterpieces of engineering skill. Even today traces of the Roman roads can be seen and a number of modern roads are constructed on the foundations laid by the labour battalions of the Roman army. In this age of increasing speed and heavy traffic, hard wearing, trouble free, non-skid COATED MACADAM *is recognised as the best and most lasting surface for the nation's road network.*

but today's experts are at... **FCMI**

ISSUED BY FEDERATION OF COATED MACADAM INDUSTRIES

W. MERVYN LAW, M.B.E., M.Inst.C.E., M.I.Mun.E., DIRECTOR. *TELEPHONE: SLOANE 1002.*

STRAMIT CLASS 1 SLABS

*fully satisfy the requirements of the *Act regarding Thermal Insulation and Resistance to Spread of Flame!*

* THE THERMAL INSULATION (INDUSTRIAL BUILDINGS) ACT, 1957

Here's a *structural* insulating material with a Class I rating for spread of flame! When Stramit Class I slabs are used as roof-decking under felt, they have a U-value of *0.23* and so easily satisfy the requirements of the new Act (which stipulates a U-value not greater than 0.3). And, of course, when Stramit is weathered with corrugated asbestos its U-value improves still further.

The essential Class I rating for spread of flame is achieved without further treatment, thanks to a special asbestos facing on the slabs. Stramit Class I slabs are strong, rigid and durable, and cost only 1/3d. per sq. ft.

STOCK SIZES:
2 in. thick x 4 ft. wide x 6, 8, 9, 10 and 12 ft. long.
Special sizes made to order.

ONLY 1/3D PER SQ.FT.



To: STRAMIT BOARDS LTD., COWLEY PEACHEY, UXBRIDGE, MIDDX :: Telephone: West Drayton 3751

Please send me full details of Stramit Class I building slabs.

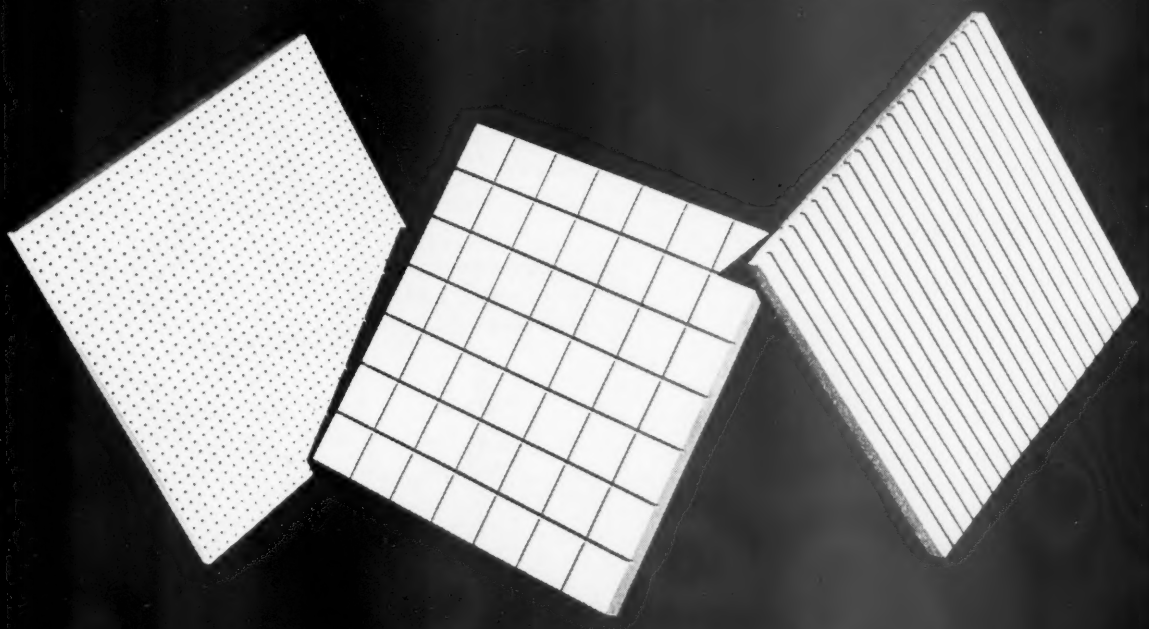
NAME.....

ADDRESS .....

.....

For the attention of..... RIBA. 11

CONTEMPORARY



ACOUSTICS!

★ Swiss pressed wood-fibre Perforated, Rilled and Chequered acoustic tiles and Rilled Boards 8′ 2″ in length, all Factory Primed.

★ Contemporary acoustic wall and ceiling treatments in new and decorative materials.

★ High acoustic efficiency, absorption co-efficients increasing progressively from 0.45 at 250 c.p.s. up to 0.90 at 4,000 c.p.s.

★ Low thermal conductivity (0.35 B.T.U/in./sq.ft./hr./°F diff.) thus providing valuable heat conservation at no extra cost.

Surveys, estimates, designs & specifications without obligation

HERMESEAL

HERMESEAL ACOUSTICS LIMITED

HEAD OFFICE: 4 PARK LANE, LONDON, W.1. Telephone: GROsvenor 4324 (5 lines).

MOISTOP
TRADE MARK

POLYTHENE COATED

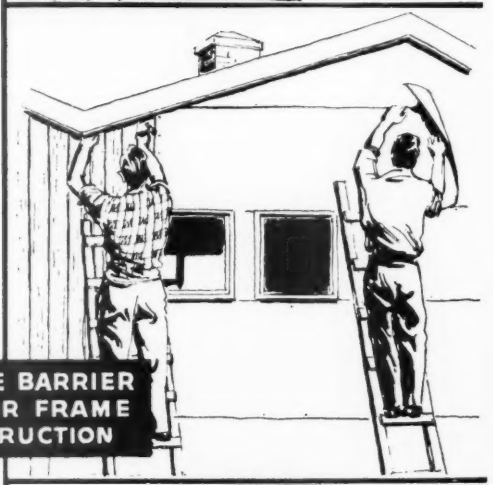
REINFORCED MOISTURE VAPOUR BARRIER



SARKING UNDER TILES AND SLATES

MOISTOP — is a SISALKRAFT product reinforced with unspun sisal fibres in the longitudinal and cross directions. The fibres are totally enclosed by two layers of high grade bitumen, which in turn are faced with tough, kraft paper, and one surface is coated with a layer of POLYTHENE.

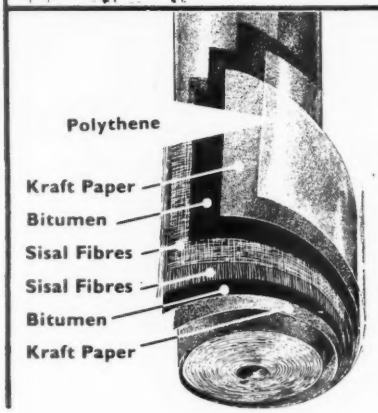
The result of this combination is an effective MOISTURE VAPOUR BARRIER that combines the strength of SISALKRAFT with the virtues of POLYTHENE.



MOISTURE BARRIER IN TIMBER FRAME CONSTRUCTION

APPLICATIONS

Sarking under tiles and slates
Moisture barrier in timber frame construction
Under timber floors
Moisture and air stop in walls
Underlay to concrete
Separation layer between concrete
Curing concrete
Form lining
Protection from frost
Temporary tarpaulin



A PRODUCT OF BRITISH SISALKRAFT LTD
Information and samples from the
SOLE DISTRIBUTORS

J.H.SANKEY & SON LTD *Established over a Century*

ESSEX WORKS · RIPPLE ROAD · BARKING · ESSEX

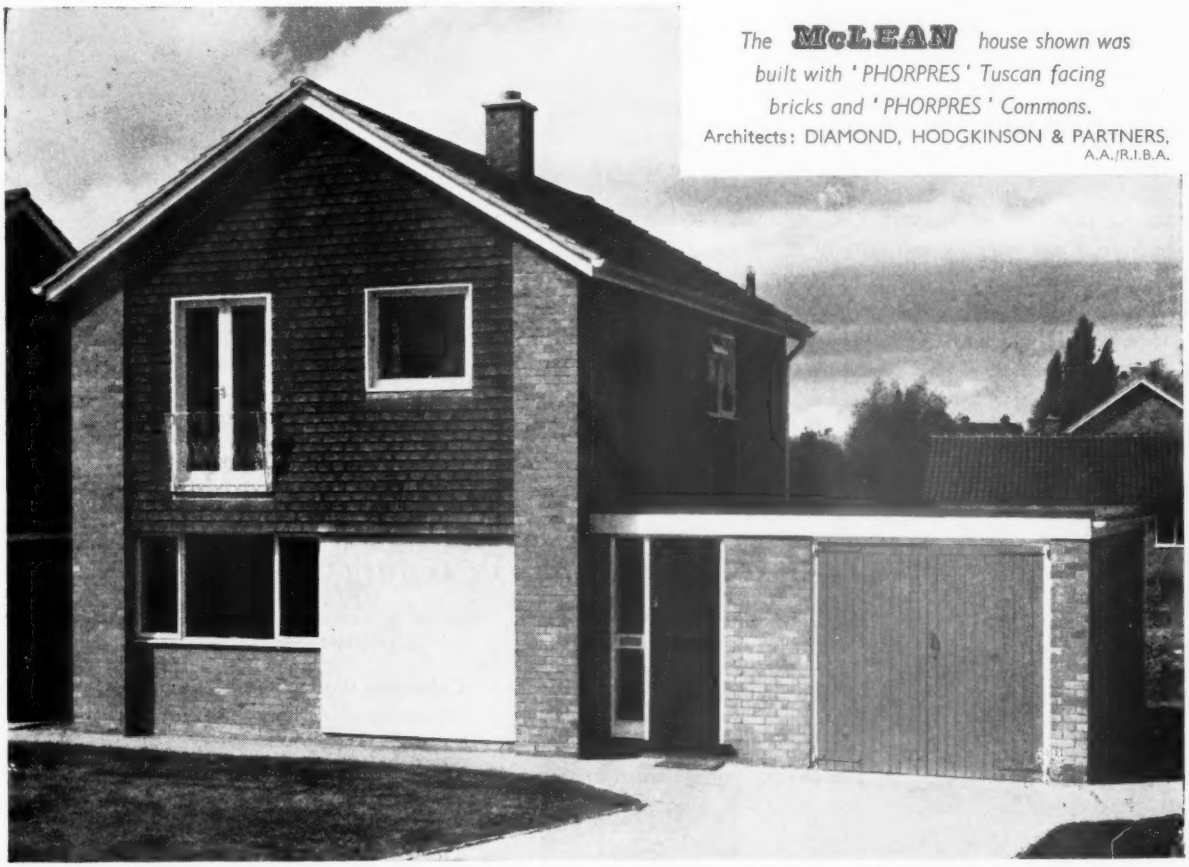
PHONE: DOMinion 6666
GRAMS: Brickwork Barking

TRADITIONAL MATERIALS * CONTEMPORARY DESIGN

Brick is the most suitable material for building in this country, giving great scope for design and allowing contemporary ideas to be economically expressed. Brickwork is also the most competitively priced walling material. It requires no maintenance, mellows attractively with the years, and is in keeping with the traditional English scene. London Brick Company Limited offers the architect an ever-widening range of attractive facing bricks giving a wide variation in colour and texture at prices designed to reduce the cost of municipal and private building projects.

Please write asking for our fully illustrated Sales catalogue.

REMEMBER POPPY DAY



The McLEAN *house shown was built with 'PHORPRES' Tuscan facing bricks and 'PHORPRES' Commons.*
Architects: DIAMOND, HODGKINSON & PARTNERS, A.A./R.I.B.A.

LONDON BRICK COMPANY LIMITED in the service of the building industry

PHORPRES

Head Office: Africa House, Kingsway, London, W.C.2. Telephone: Holborn 8282
Midland District Office: Prudential Buildings, St. Philip's Place, Birmingham 3. Telephone: Central 4141
South-Western District Office: 11 Orchard Street, Bristol 1. Telephone: Bristol 23004/5
Northern District Office: St. Paul's House, 20-22 St. Paul's Street, Leeds. Telephone: Leeds 20771

BY APPOINTMENT TO HER MAJESTY QUEEN ELIZABETH II BRICK MAKERS

AS GOOD AS A SOLID BRICK WALL!

A well known City Chairman once complained to us that intense traffic noise below his windows and excessive audibility between adjacent offices and his own was affecting his efficiency, his privacy and his peace of mind.

We therefore designed and built for him, under a WRITTEN GUARANTEE to solve his problems, sound-proof doors and windows like those illustrated here.

Numerous tests on site and careful laboratory analysis proved that we must reduce the existing sound pressure level of 80 decibels to 35 decibels to achieve the comfort he desired.

So, to fulfil our undertaking, it was necessary to construct each door and window, not only to acceptable dimensions and a high standard of design, but to provide a MINIMUM sound transmission loss of 45 decibels—no less, in fact, than that of a SOLID 4½" BRICK WALL.

Which we very successfully did!



Photo by Courtesy of The Metal Box Co. Ltd.

"Sound-proof communicating door, designed to match existing decor."

These are just two examples of the work of Sound Control Limited, who can analyse, diagnose and cure most problems in sound. No matter what your noise problem may be, we invite you to consult us.

SOUND CONTROL LIMITED

A MEMBER OF THE THERMOTANK GROUP OF COMPANIES

CONTRACTORS IN ACOUSTICS

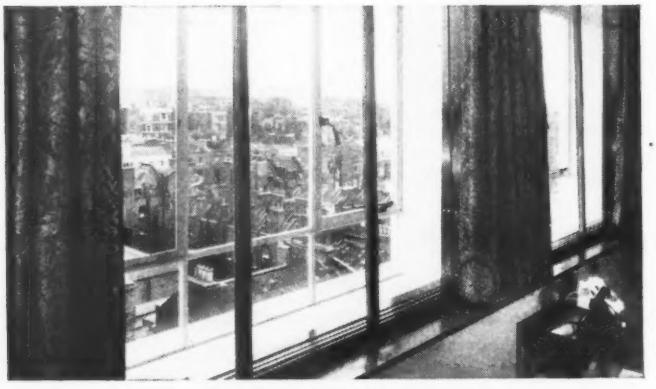


Photo by Courtesy of The Metal Box Co. Ltd.

Colneside Works, West Drayton, Middlesex
Telephone : West Drayton 3685–9 (5 *lines*)

Scottish Office: 10 Bothwell Street, Glasgow
Telephone : Central 6571/2

"Typical sound-proof window units designed and built to provide the sound transmission loss required."



SEND NOW FOR THESE

INFORMATION BOOKS

1. ROOFING
2. FLOORING
3. TANKING

The National Association of Master Asphalters have published these new booklets in which they describe the principles of application of NAMASTIC Asphalt.

"NAMASTIC" Asphalts are manufactured from British materials, and as such represent an economy in the United Kingdom. In addition, saving of freight on imported materials results in lower costs to the client.

AND SPECIFY WITH CONFIDENCE

NAMASTIC FOR ROOFING FLOORING TANKING

The Association membership is made up of the following:-

Associated Asphalt Co. Ltd.
Bolton & Hayes Ltd.
Bolton Stone Concrete & Asphalt Co. Ltd.
William Briggs & Sons Ltd.
Cambridge Asphalte Co. Ltd.
Coverite (Asphalters) Ltd.
Davies Bros. (Asphalters) Ltd.
Durable Asphalte Co. Ltd.
Durastic Ltd.
Faldo Asphalte Co. Ltd.
Field & Palmer Ltd.
Improved Asphalte Co. Ltd.
Mountfield Junior
Natural Rock Asphalte Ltd.
Oxford Asphalt Co.
C. Pasini (Ipswich) Ltd.
Permanite Ltd.
The Rock Asphalte Co. Ltd.
J. Taylor & Sons (Asphalters) Ltd.

NATIONAL ASSOCIATION OF MASTER ASPHALTERS · "NAMASTIC"

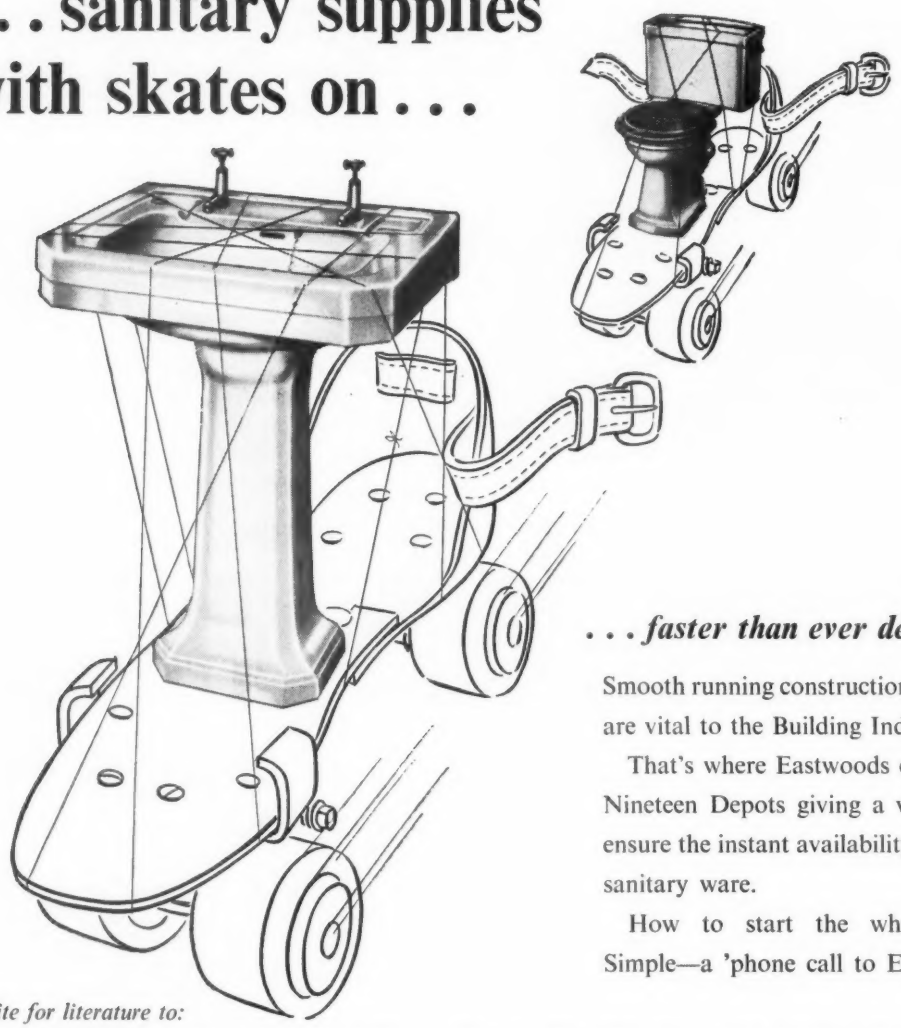
For copies of this booklet or free technical information on Asphalt for Building, apply to the Secretary:—

NATIONAL ASSOCIATION OF MASTER ASPHALTERS · 9 · CLARGES STREET · LONDON · W · 1

Telephone: Grosvenor 5333 **Established 1933**

EASTWOODS *keep your programme up to schedule . . .*

. . . sanitary supplies with skates on . . .



. . . *faster than ever delivery* . . .

Smooth running construction programmes are vital to the Building Industry.

That's where Eastwoods can help you! Nineteen Depots giving a wide coverage ensure the instant availability of top grade sanitary ware.

How to start the wheels turning? Simple—a 'phone call to Eastwoods.

Write for literature to:

EASTWOODS SALES LIMITED

Eastwood House, 158-160 City Road, London, E.C.1 *Telephone: Clerkenwell 2040 (30 lines)*

Or to: Northern Sales Office, 29 St. Sepulchre Gate, Doncaster. *Telephone: Doncaster 49256.*

Or any of our Depots:

CAMBRIDGE, 117 East Road. Tel. Cambridge 2087; **COVENTRY**, Sandy Lane. Tel. Coventry 61707; **DONCASTER**, Crompton Road. Tel. Doncaster 61442; **EASTLEIGH**, Allbrook, Eastleigh, Hants. Tel. Eastleigh 2621/2; **GILLINGHAM** (Kent), Trafalgar Street. Tel. Gillingham 59071; **GREENWICH**, Norman Road, S.E.10. Tel. GREenwich 1172; **HILLINGDON**, Uxbridge Road. Tel. Uxbridge 6421/2; **IPSWICH**, Cumberland Street. Tel. Ipswich 53794; **ISLEWORTH**, 11 The Square. Tel. HOUnslow 1181; **KINGSLAND**, 4 Orsman Road, N.1. Tel. SHOredith 4133/4; **KING'S LYNN**, South Everard Street. Tel. King's Lynn 3718; **LEEDS**, 7, 320 Meanwood Rd. Tel. Leeds 40484; **LETCHWORTH**, Birds Hill. Tel. Letchworth 1700; **MORTLAKE**, High Street, S.W.14. Tel. PROspect 7231; **NORWICH**, The Nest, Rosary Road. Tel. Norwich 21498; **SOUTHEND-ON-SEA**, Fairfax Drive, Southend, Essex. Tel. Southend 48171; **SUDBURY** (Suffolk), North Street. Tel. Sudbury 2416; **WEMBLEY**, St. John's Road. Tel. WEMbley 5404/5; **WEYBRIDGE**, Bridge Wharf. Tel. Weybridge 3963.

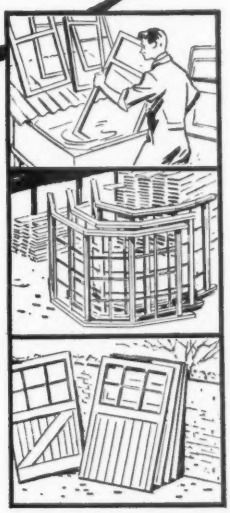
E/2687

Check swelling and warping



Preserve with CUPRINOL

WATER REPELLENT WOOD PRESERVERS



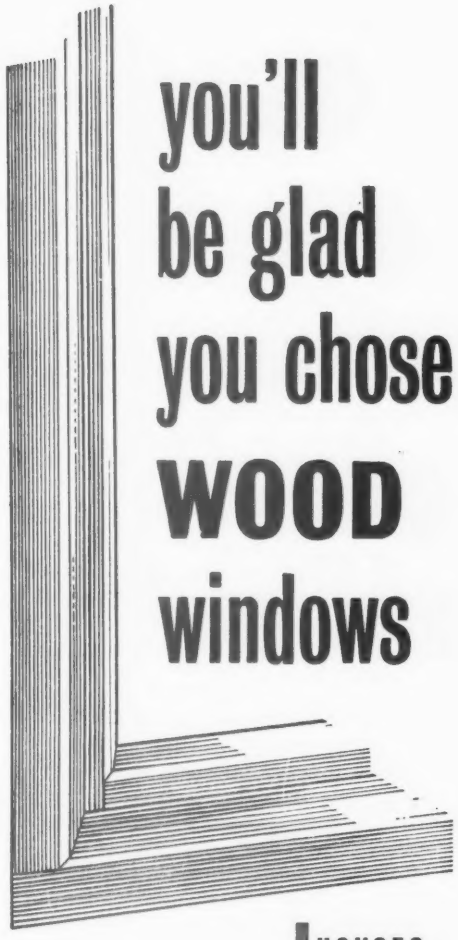
CUPRINOL W.R. Clear and W.R. Green combine water repellency with the preservative properties of CUPRINOL, which has been proved in use for more than forty years. By stabilizing movement in timber, they minimise the swelling and shrinking of wood under changing moisture conditions.

CUPRINOL W.R. grades also prevent attack by wood-boring beetles and rot; can be painted or varnished over. Easy to apply on site by dipping. They are particularly suitable for vertical boarded shop fascias, boarded cladding to buildings, doors, ladders, window frames and all joinery which is exposed on building sites prior to being built in.

For a free technical bulletin, or for advice on wood treatment or expert assistance in dealing with outbreaks of Dry Rot, Death Watch Beetle or Woodworm, please write or telephone:—

CUPRINOL LTD., Terminal House, Victoria, London, S.W.1 Tel: SLO 9274

you'll be glad you chose WOOD windows



Wood windows are ideal in every way for . . .

HOUSES
FLATS
SCHOOLS
HOSPITALS
OFFICES
FACTORIES

Wood is functional, economical to install and maintain, and provides maximum flexibility in expression. Furthermore, wood windows reduce heat losses, sound transmission and condensation. Remember, too, with wood windows you are ensured a quick delivery.

A CASE IN POINT Wood windows have been used in the new Administrative Block at London Airport with a view to combining functional efficiency with the required style of contemporary design. For advice on wood windows suitable for all types of buildings, consult E.J.M.A. Write to the address below.

THE ENGLISH JOINERY MANUFACTURERS' ASSOCIATION (INCORPORATED)

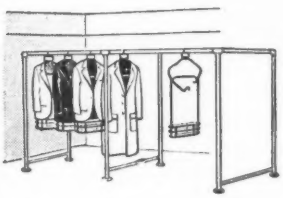
(with which is associated the Scottish Joinery and Door Manufacturers' Association)

SACKVILLE HOUSE • 40 PICCADILLY • LONDON, W.1 • Tel: REGENT 4448/9



...and I recommend a "SIEBER" CLOAKROOM here, because...

- ★ It saves valuable factory floor space.
- ★ All wearing apparel is neatly and compactly stored.
- ★ Rain soaked garments are thoroughly **aired** and **dried,** reducing absenteeism due to colds, chills, etc.
- ★ Maximum hygiene is assured; as neither dust, dirt nor musty odours can cause a breeding-ground for vermin or infectious diseases.
- ★ No costly repair or maintenance charges are incurred.
- ★ Low cost proves an investment, not an expense.
- ★ The "SIEBER" Hanger System fully meets the new Factory Act."



Can be installed in new or existing buildings, in single or double tiers.



"Pilferproof" Locking Basket Hanger.

Accommodates a COMPLETE CHANGE of clothing. Locking basket and other types of Hanger available.

SIEBER AIR-DRY HANGER EQUIPMENT

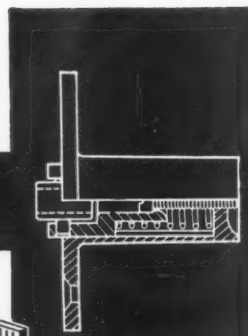
Permanent exhibit at The Health and Safety Centre, London, S.W.1. Write for literature and details of our Free Planning Service.

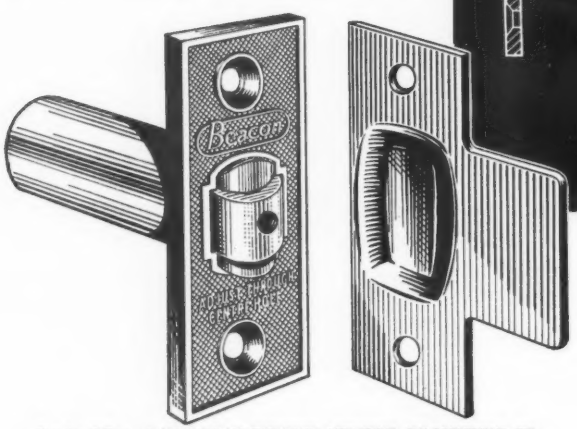
JAMES SIEBER EQUIPMENT CO. LTD., 124 Africa House Kingsway, London, W.C.2 **Tel: HOLborn 4531 & 5121**

Beacon

REGISTERED TRADE MARK

front adjustable roller catch





the catch that's..

Caught On!

Popular with householders and builders alike, because it is efficient in operation, yet neat and unobtrusive in appearance. Tension and projection of catch easily adjusted after fitting with small screwdriver through hole in centre of roller.

Zinc diecast construction and finished Florentine Bronzed or Bright, Lacquered. Faceplate dimensions $2\frac{1}{4}'' \times \frac{7}{8}''$.

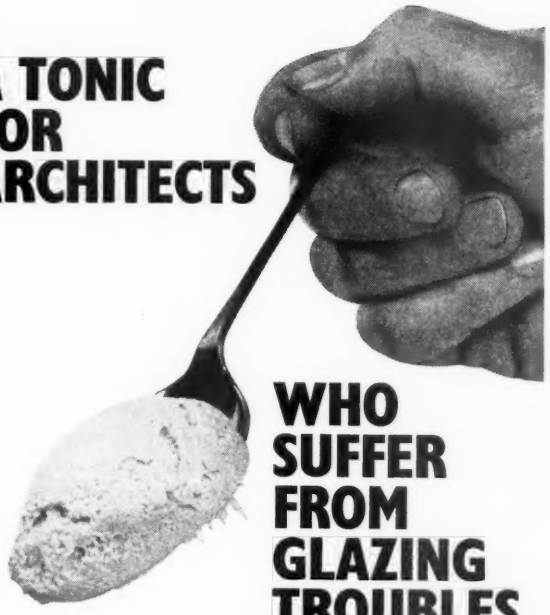
SMITH and DAVIS Ltd.

21 Beacon Works · Friar Park Road
WEDNESBURY · STAFFORDSHIRE

London Office: 61/62 BROAD STREET AVENUE, BLOMFIELD ST. LONDON, E.C.2
Tel: LONDON WALL 2151 *'Grams: Beaconian Ave London*

Tel: Wednesbury 0721-5 · *'Grams: "Beaconite" Wednesbury*

A TONIC FOR ARCHITECTS



WHO SUFFER FROM GLAZING TROUBLES

Reputations are safeguarded, including our own, because "Ferramastic" glazing is covered by work inspections as part of the specification service.

By technical visits at the glazing stage, we can advise upon fixing techniques, inspect work in progress and, in particular, report back upon the glazing job.

"Ferramastic" specifications can bring this kind of co-operation into being without extra cost. We do recommend early consultation with us, to gain full benefit from the service. Suggested glazing procedures can be supplied on request at any time.



Amazing for Glazing

"FERRAMASTIC" REGD.

METAL CASEMENT PUTTY

Manufactured by:—
STORRY WITTY & CO. LTD., BEVERLEY, YORKS
Telephone: Beverley 81201/2 Telegrams: "Stority, Beverley"



Good flush doors speak for themselves

There is no mistaking the outstanding high quality of Leaderflush doors wherever they are seen—it is a quality born of many years' experience in specialised manufacture—a quality which speaks for itself.

STOCKISTS. **LEADERFLUSH DOORS** can be obtained immediately ex-stock from the following officially appointed distributors for the areas stated as well as direct from the works at Trowell, Nottingham.

BIRMINGHAM & W. MIDLANDS
British Door Marketing Co. Ltd., Burton-on-Trent.

BRISTOL & SOMERSET
Iron & Marble Co. Ltd., Bristol.

CUMBERLAND & WESTMORLAND
Wm. Coulthard & Co. Ltd., Carlisle.

DEVON & CORNWALL
Jewsons Ltd., Plymouth.

DURHAM, NORTHUMBERLAND & N. RIDING of YORKSHIRE
J. M. & J. Bartlett Ltd., Newcastle upon Tyne.

GLOUCS., WORCS & HEREFORDSHIRE
Sharpe & Fisher Ltd., Cheltenham.

ANGLESEY & CAERNARVONSHIRE
Wm. Roberts & Co. Ltd., Menai Bridge.

SOUTH WALES
H. R. Paul & Son Ltd., Barry.

ABERDEEN & N. SCOTLAND
George Gordon & Co. Ltd., Aberdeen.

EDINBURGH & E. SCOTLAND
Alexander Mackenzie & Co. Ltd., Edinburgh.

GLASGOW & W. SCOTLAND
Gardner & Greenshields Ltd., Glasgow.

"DELIVERY ON TIME" to all parts of Great Britain and the world is the recognised policy of LEADERFLUSH.

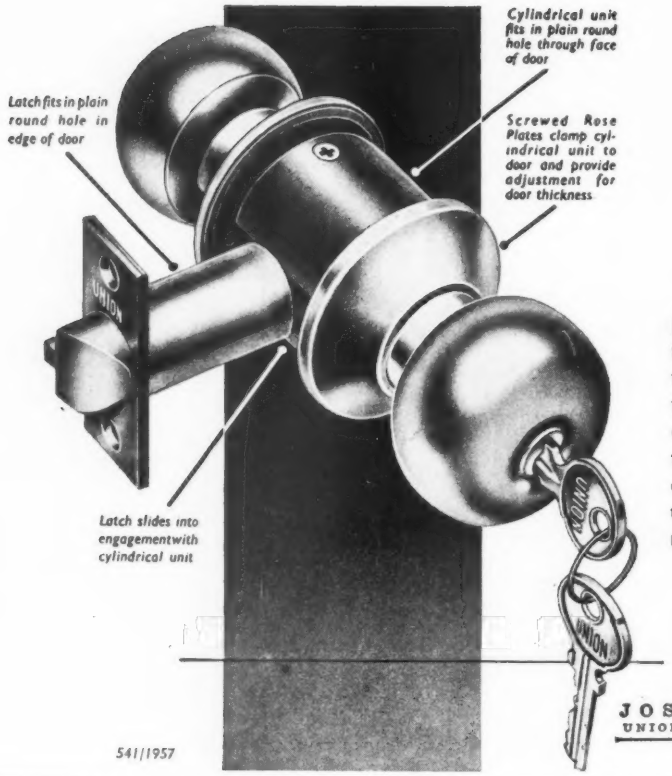
LITERATURE—giving full specification of LEADERFLUSH doors will be gladly sent on request.

Leaderflush

BRITAIN'S FINEST FLUSH DOORS

LEADERFLUSH (Doors) LTD, TROWELL, NOTTINGHAM.
Tel: ILKESTON 623 (5 lines). Telegrams: LEADAFLUSH, ILKESTON, NOTTINGHAM

★ **THERE ARE OVER 2,000,000 LEADERFLUSH DOORS IN USE TODAY**



541/1957

UNION

KNOBSETS

UNION RONDO KNOBSETS have now been on the market for several months, and already many thousands have been made, sold and fitted. Even this short experience has proved that as regards quality these new knobsets are worthy of our trademark. You can therefore specify them with every confidence. An illustrated brochure containing full details of the complete range of UNION Knobsets is now available. Write now for your free copy.

Though supplies are obtainable only through Builders Hardware Merchants our expert advice is always at your disposal.

JOSIAH PARKES & SONS LTD. UNION
UNION WORKS WILLENHALL · STAFFS ENGLAND
BUSH HOUSE, LONDON · JOHANNESBURG, SOUTH AFRICA
ENGLISH OWNED AND CONTROLLED
EST. 1840

Professional men agree



a Trianco boiler is the automatic choice

All experts agree, and the housewives confirm, that the Trianco boiler is the automatic choice for providing efficient and economical central heating and hot water supplies. They know there is a Trianco boiler for every type of installation, both solid and oil-fired. These boilers are thermostatically controlled and require a minimum of attention. They provide ample hot water and a warm home. Solid fuel from 50,000 B.t.u. upwards. Oil-fired from 100,000 B.t.u.

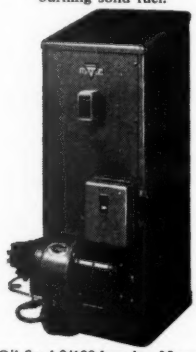
TRIANCO automatic boilers

Write for Brochures

TRIANCO LTD., IMBER COURT, EAST MOLESEY, SURREY EMBerbrook 3300



P. 50 of 50,000 B.t.u. capacity burning solid fuel.



Oil-fired 0/100 burning 35 sec. gas oil.

Siscomatte

the finest wall-paint yet— for steamy atmospheres



Resists steam—won't peel or flake.
Ideal for kitchens and bathrooms, restaurants, canteens and other industrial premises, where steam is a major problem.

Calcarium

the best water-paint for indoor and outdoor surface decoration



Strongly recommended by architects, professional painters, builders and decorators.
For hotels, factories, industrial buildings and private residences—town, coast and country

Two famous paints, now available from the same source

Sissons

Sissons Brothers & Co. Ltd., Bankside, Hull (Incorporating A. T. Morse Sons & Co. Ltd., Bloemfontein Avenue, Shepherds Bush, London W.12. Tel. Shepherds Bush 9111-7)

ZYLEX *SLATER'S FELT*

and

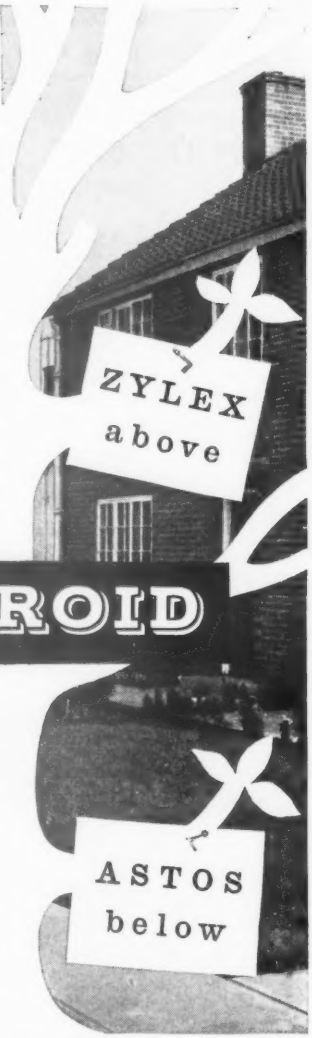
ASTOS

100% PERMANENT DAMPCOURSE

together keep out weather and damp

ZYLEX Slater's Felt. Standard for boarded roofs, Hessian-reinforced for open rafters.

ASTOS Asbestos Dampcourse. Standard or lead-lined, easily identifiable on site by the famous gold band.



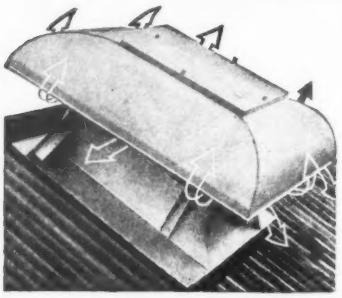
High quality slater's felt, 100% permanent dampcourse. These two products, invariably specified together, have done much to foster the wealth of confidence so firmly associated with RUBEROID products.

TRADE MARK RUBEROID REGISTERED

THE RUBEROID CO. LTD.,
485 Commonwealth House,
1-19 New Oxford Street,
London, W.C.1

ZA 359c

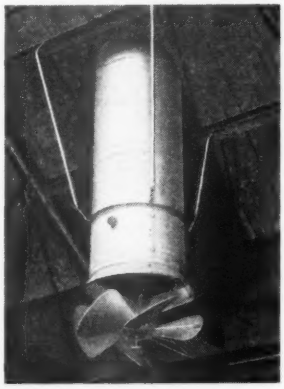
Roof Ventilator



The 'Airflo' Powered Roof Ventilator can easily be incorporated into any building scheme. Fits any roof angle and is light enough to use on iron or corrugated roofs. Unit supplied assembled ready for fixing.

from **£29 15s. 0d.**

Air Diffuser



The 'Airflo' Diffuser unit offers the best method of ventilating single storey workshops. Fresh air is drawn into the premises and discharged directly over the working area. A variably pitched diffuser regulates the effective area of ventilation and this can easily be controlled from below by engaging a hooked rod on the operating handle. The height at which the fan has to be fixed is immaterial since the coverage and intensity of air movement can be adjusted at will.

"Airflo" TRADE MARK

a great service to industry

Industrial Fan & Heater Co Ltd

"Airflo" *Works:* BIRMINGHAM, 11 *Phone:* VICtoria 2277

and at LONDON · MANCHESTER · SWANSEA NEWCASTLE UPON TYNE

A Member of the SIMMS Group

PARK YOUR CYCLES THE **ODONI** WAY

(Regd. Trade Mark)

WITH ODONI PATENT "ALL-STEEL" **BICYCLE STANDS**

TYPES TO SUIT ALL POSSIBLE REQUIREMENTS, FOR INDOOR OR OUTDOOR USE.
SINGLE- OR DOUBLE-SIDED. HORIZONTAL OR SEMI-VERTICAL.



ILLUSTRATION OF TYPE 5

Double-sided horizontal stand as supplied to Cheshunt Grammar School (Hertfordshire County Council).

Ground Frame width 9′–1″

Roof span 14′–1″ (chord)

Supplied in any even-numbered unit from 16 cycles.

We are at your service for planning the maximum accommodation in the minimum area.

Full details from the Sole Manufacturers and Patentees

ALFRED A. ODONI & CO., LTD.

SALISBURY HOUSE, LONDON WALL, LONDON, E.C.2

Telephone: NATional 8525/6

Telegrams: Odoni Ave London



Arch.: Whinney, Son & Austen Hall

flexwood is so versatile

(Flexwood in ZEBRANO and FIGURED ASH at the Commercial Bank of Australia, London, W.1)

Flexwood is a genuine, high-grade, cloth-backed veneer ; a really superb material for interior decoration, yet very reasonable in price.

And the beauty of Flexwood is that it can be applied direct—on flat or rounded surfaces—and will not warp, crack, shrink or expand.

Flexwood is made in a wide range of beautifully grained timbers.

All Flexwood work is carried out by our own specially trained craftsmen. We shall be pleased to quote on any plans and elevations you send us.

Flexwood

Alexandria Trading Corporation Ltd.
121 London Wall, London, E.C.2
Telephone : MONarch 2272



Paint Service for Architects . . .

Architects are invited to take advantage of the expert guidance and assistance freely provided by our technical department in the preparation of detailed painting specifications.

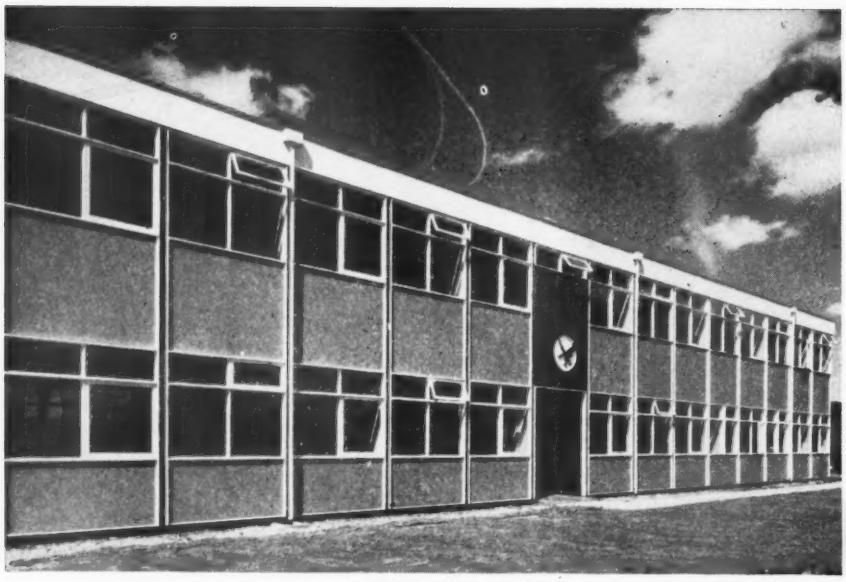
Problems relating to colour, condition of surface, preparation of surface, suitability of materials, method and means of application are all within the scope of our team of technical experts.

P.J. INDUSTRIAL & DECORATIVE PAINT FINISHES
EST'D 1854

PINCHIN, JOHNSON & CO.,
4 CARLTON GARDENS, LONDON, S.W.1
Tel.: TRAfalgar 5600

PRINCIPAL P.J. BRANCHES AND STOCK DEPOTS:

BELFAST: Dalton Buildings, Dalton Street	*Belfast*	*58643*
BIRMINGHAM, 1: King Edward's Place, Broad Street ...	*Midland*	*1042-3-4*
BOOTLE, 20: 72 Brewster Street...	*Liverpool, Bootle*	*2121*
BRIGHTON, 1: 26-27 Elder Place	*Brighton*	*23739*
BRISTOL, 8: 21 High Street, Clifton	*Bristol*	*33689*
GLASGOW, C.2: Ocean Chambers, 190 West George Street	*Douglas*	*3281-2*
LEEDS, 11: 123 Water Lane	*Leeds*	*24377*
MANCHESTER, 3: 22 Bridge Street	*Blackfriars*	*3800*
NEWCASTLE-ON-TYNE, 1: Pudding Chare	*Newcastle-on-Tyne*	*21919*
SOUTHAMPTON: 41 Lower Canal Walk	*Southampton*	*23648*



Cost of DERWENT superstructure is competitive and simple foundations required reduce overall building cost.

An extensive range of components and flexibility of system gives great freedom of design.

Insulation value is high—heating costs low.

Site assembly is fast, giving rapid completion.

Elasticity and low weight of all timber construction is ideal for 'difficult' sites.

Western Red Cedar or West African Varnished Mahogany cladding gives warm, sympathetic finish.

Use of highly prefabricated system simplifies preparation of working drawings.

derwent

VIC HALLAM LTD.

phone langley mill 2301(7 lines)

prefabricated timber structures - langley mill, nottingham

THERMAL INSULATION OF INDUSTRIAL BUILDINGS

by reducing heat losses due to conduction, convection and radiation is the special study of

HORSLEY, SMITH AND CO. (BUILDING INSULATION) LIMITED

We offer in the first place a specialised advisory service, covering both methods and materials, to those whose task it is either to plan new buildings which will be economical to warm or to reduce the waste of heat in existing buildings. When plans have been approved we are able both to supply the materials and do the work. For the services of a technical representative please write to:—

HORSLEY, SMITH & COMPANY (BUILDING INSULATION) LIMITED
Manchester Road, Astley, near Manchester. *Telephone: Atherton 1394*

NORTHERN POLYTECHNIC

Holloway Road, London, N.7

DAY SCHOOL OF ARCHITECTURE

The Diploma in Architecture, which is awarded on the successful completion of the five years' full time course and subsequent passing of the examination in Professional Practice, qualifies students for exemption from the Final Examination for Associateship of the Royal Institute of British Architects. The Diploma is also accepted as a qualification for registration under the Architects (Registration) Acts, 1931–38.

EVENING SCHOOL OF ARCHITECTURE

The five years' course is recognised by the R.I.B.A. for exemption from the Intermediate Examination. A course is also available in preparation for the Final Examination.

The Department of Architecture, Surveying and Building provides full-time and evening courses for those who desire to become Quantity Surveyors or to enter the higher branches of the Building Industry. The full-time courses in Surveying are approved by the Royal Institution of Chartered Surveyors.

Particulars of fees and a prospectus may be obtained on application to the Head of the Department,
Mr. T. E. Scott, C.B.E., F.R.I.B.A.

DYE-LINES, BLUE PRINTS, STATS, ETC.

Tracing and Drawing Office Supplies

KINGSTON PHOTOGRAPHIC AND DRAWING OFFICE SUPPLIES LIMITED

Works: 32–34, Fairfield Road, Kingston-on-Thames
Tel: KIN 3911 & 6094

Retail: 3, The Parade, London Road, Kingston-on-Thames
Tel: KIN 6726

MODELS ESTAB. 1883

BY

JOHN B. THORP

98 GRAY'S INN ROAD, W.C.1

FOR TOWN PLANNING, PUBLIC BUILDINGS, ESTATES and INTERIORS

Telephone: HOLBORN 1011

A CONTINUOUS

Photo Printing Machine

for under

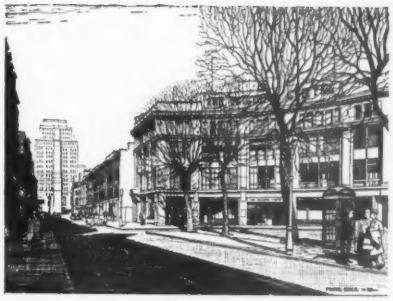
£100

Particularly suitable for Architects and Consulting Engineers

Full details from:

Archiprint Services Limited,
214 Shirley Road,
Southampton

and Branches



USE THE

BUILDING CENTRE

for all your problems relating to building materials and equipment

•

Call, write or telephone

Open – Monday to Friday

9.30 a.m. – 5 p.m.

Saturday

9.30 a.m. – 1 p.m.

26 Store Street,

LONDON, W.C.1

Telephone: Museum 5400 – 10 lines

For WARMER, DRIER and CHEAPER HOMES

Specify

Lightweight Concrete Blocks

FOR INNER LEAVES OF EXTERNAL WALLS AND PARTITIONS

(LOAD BEARING AND NON-LOAD BEARING)

But ensure that they comply with British Standard Specifications by ordering from a member of the Federation of Building Block Manufacturers

RECOMMENDED BY LEADING AUTHORITIES
APPROVED BY BUILDING SOCIETIES

For particulars or list of members apply:

The Secretary

FEDERATION OF BUILDING BLOCK MANUFACTURERS

11 Ravensbury Avenue, Morden Surrey. Telephone: Mitcham 1463

FOUNDED 1882

The Institute of Clerks of Works of Great Britain (Inc.)

NORTHERN IRELAND CHAPTER
7 COLLEGE SQUARE NORTH, BELFAST. Hon. Sec.: J. A. Kirkpatrick, 22 North Gardens, Bloomfield, Belfast.

NORTHERN CHAPTER
4 WOODHOUSE SQ., LEEDS, 1. Hon. Sec.: J. HIRST, 9 Willowfield Crescent, Bradford 2.

SCOTTISH CHAPTER Royal Incorporation of Architects in Scotland, 15 RUTLAND SQUARE, EDINBURGH, 1. Hon. Sec.: R. G. JACK, 61 Drum Brae South, Edinburgh.

NORTH WESTERN CHAPTER Manchester Society of Architects, 16 ST. MARY'S PARSONAGE, MANCHESTER. Hon. Sec.: T. S. PARKINSON, 28 Marland Crescent, Barlowfold, Reddish, Stockport, Cheshire.

MIDLAND CHAPTER Chamber of Commerce, 95 NEW STREET, BIRMINGHAM, 2. Hon. Sec.: L. D. PINFOLD, Glen Tor, Birmingham Road, Bacon's End, Coleshill, Nr. Birmingham.

ARCHITECTS, SURVEYORS, ENGINEERS requiring Clerks of Works are invited to apply to:
The Secretary, E. W. HAZELL, A.C.I.S.
LIVERPOOL HOUSE
15/17 ELDON STREET, LONDON, E.C.2

Examinations will be held at the Royal Institute of British Architects, 66 Portland Place, W.1. Examinations are also being held at 15 Rutland Square, Edinburgh.

'KEY cut my drain laying costs by 28%'

says Major J. H. HACKETT

Director of Hackett (Builders) Limited, Norwich

'A job which would have taken several weeks by traditional methods was completed in under a week with Key Pitch Fibre pipes', says Major J. H. Hackett, of Hackett (Builders) Limited. 'In this time, the entire main sewage pipe to a new estate was laid by a team of only three men. Labour costs for laying and jointing were cut from 1s. 2d. to 1¾d. per foot run. The need for concrete bedding was completely eliminated. With performance at least the equal of best quality materials used by former methods, Key pipe gave me an overall saving of at least 28% on the job'.

Key Pitch Fibre pipes, which were supplied to Hackett (Builders) Limited by Robert R. Ruymp & Son Ltd., Norwich, through B. Finch & Co. Ltd., Essex, (Key distributors), are cutting costs on all the building sites of this company. They are also providing a far more effective answer to the problems of an area with exceptionally bad conditions of loose earth and subsidence. This modern form of drainage could bring equivalent or even greater advantages in performance, economy and speed of laying in your own building projects.

FULLY APPROVED

Key pipes comply with the requirements of B.S. 2760, 1956, and carry the B.S.I. 'Kite' mark.

NO CRACKING THROUGH SETTLEMENT

The resilience of pitch fibre pipes eliminates cracking under normal conditions of earth settlement, making bedding concrete unnecessary.

SIZES AND FITTINGS

2, 3, 4, 5 and 6 in. sizes. 4 and 6 in. diameters are supplied in 8 ft. lengths, other diameters in 5 ft. 6 in. lengths. Easily coupled to conventional drainage fitments.



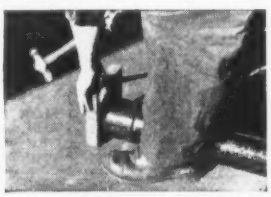
Major J. H. Hackett handling Key Pitch Fibre pipe on one of the building sites of his company.

SPEEDING THE JOB — CUTTING THE COST

500 feet per hour is a modest rate for laying Key Pitch Fibre pipes, and the simple jointing system ensures 'all weather' laying. With no cement to dry out, completed drains can be tested and trenches backfilled immediately. When you add laying costs to pipe costs, together with other site advantages, KEY means an overall economy compared with other drainage systems.



FIT IT



TAP IT



TEST IT

IN ANY WEATHER!

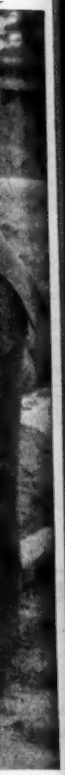
Get to know more about KEY PITCH FIBRE PIPES

A product of the **KEY ENGINEERING COMPANY LIMITED** Larkfield, Near Maidstone, Kent. Telephone: Maidstone 7461 and 7233

Reed Paper Group

TGA KD 14

Printed in Great Britain by Unwin Brothers, Ltd., Woking and London
All communications regarding Advertisements in this Journal should be addressed to the Advertisement Manager, R.I.B.A., 66 Portland Place, London, W.1
Telephone: Langham 2271



ore
y.

OST
ing
ple
ng.
ted
ck-
ing
site
omy

PES

eed

TGA KD 14

1

The FALCON 10 G

heavy duty gas range



cooks supremely well for any number of people

The Falcon 10G can be installed singly, or in multiple installations, in runs or island suites.

Easy to use, clean, and maintain, it is one of the best-looking, most efficient and labour-saving appliances of its type. Moreover, it can stand up to the roughest treatment.

All in all, the Falcon 10G is one of the finest examples of Falkirk quality. For a fully illustrated leaflet, write to:

THE FALKIRK IRON COMPANY LIMITED

18 Dering Street Hanover Square, London, W.1

REGD. TRADE MARK

Proprietors: Allied Ironfounders Ltd., makers of cookers, boilers, fires and baths



Kirche Berengen, Switzerland

STAINED GLASS & LEADED GLAZING

❖ STEEL & BRONZE WINDOWS ❖

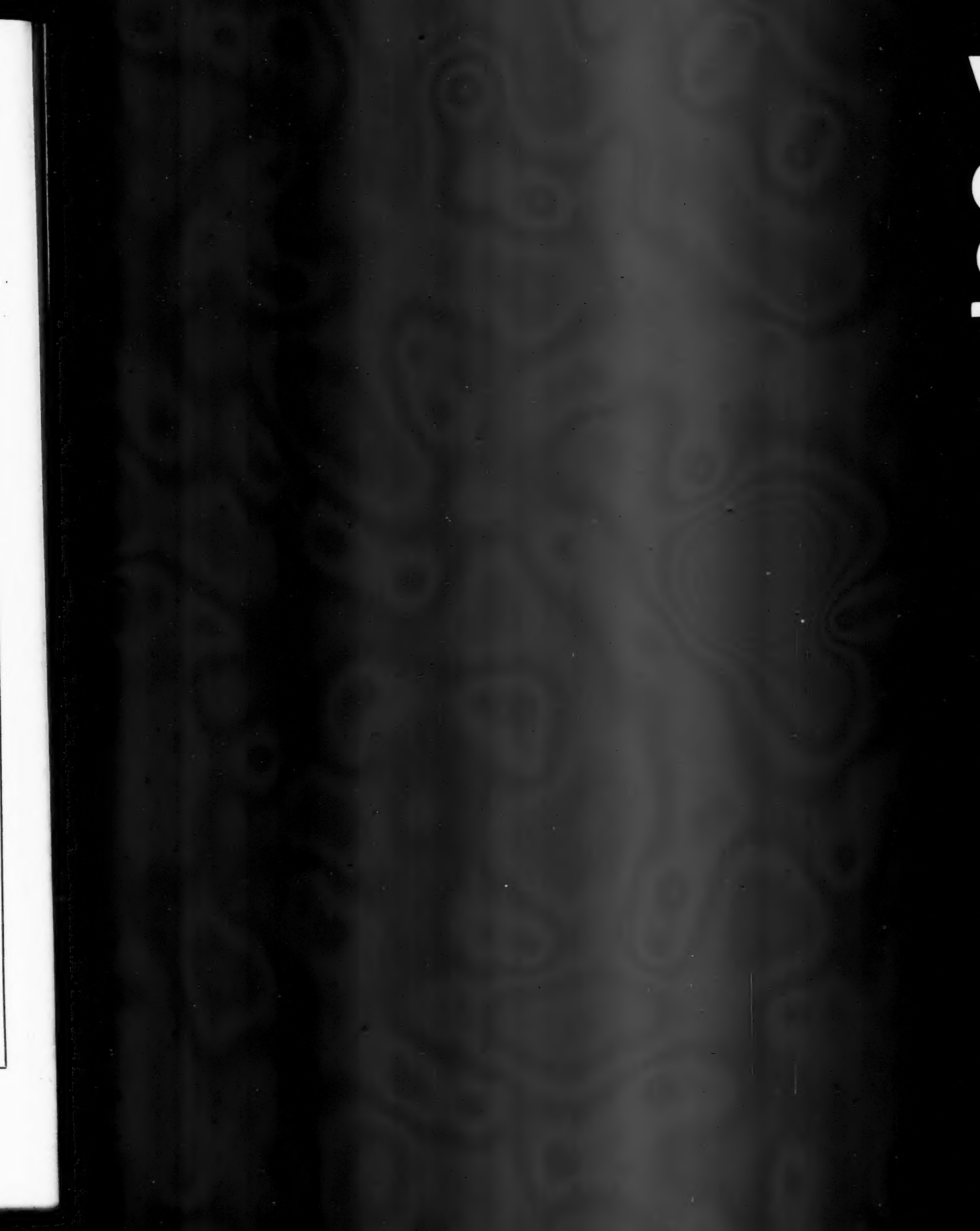
SUPERIOR STANDARDS · 'ALL CLEAR' SLIDING & SOUNDPROOF WINDOWS · LANTERN-LIGHTS DOMES AND ORNAMENTAL IRONWORK

C. E. WELSTEAD LTD.

St. Andrew's Works,

TANFIELD ROAD

TELEPHONE CROYDON CRO 3484



BUILDING RESEARCH STATION DIGEST 116

November 1958

Roof Drainage

LIKE many other design features in building, that of eaves guttering has evolved largely through trial and error and there are rules of thumb on which designs are commonly based. A survey of practice indicates that existing provisions for roof drainage, often based on these rules, whilst giving satisfactory results, are often over-generous in comparison with the requirements found in an experimental study that has been made of the behaviour of gutter and downpipes.

This Digest presents data that provide a basis for rational design of eaves gutters and downpipes. The design calls for knowledge, first of the maximum flow load for which provision must be made and, secondly, of the capacity of gutters and downpipes of various sizes.

The flow load

The flow *load* with which a given gutter may have to cope depends on the area of roofing discharging to the gutter, its pitch, the peak rate of rainfall (usually expressed in inches per hour) and the angle at which the rain falls when it is at a peak. To some extent also the duration of rainfall peaks is important: if the gutter is almost empty to start with, a sharp peak lasting only a minute or two might be accommodated although its continuance until after the gutter was full would cause overflow.

Fortunately, for present purposes, it is permissible to adopt a simplified approach to the vast mass of available rainfall statistics. Regional differences may be ignored. They are significant in relation to total rainfall, but there is no evidence that they are significant in relation to peak intensities. It is worth noting, however, that in Britain peak intensities tend to occur in summer months; wind speeds then tend to be lower than in winter, and hence the rain falls more nearly vertically; this mitigates the flow load with pitched roofs.

This reduces the number of important features in the rainfall pattern to three: average intensity of a fall, its duration and frequency of occurrence.

The average intensity recommended as a basis for general design purposes for eaves guttering is 3 inches per hour. This intensity is found to occur, in any given locality, over a period of five minutes about every other year, and over a period of ten minutes only once in about eight years. (To give an idea of the margin of safety overflow offered by this basis, it is worth mentioning that an intensity of 4 inches per hour lasting for five minutes occurs only once in five years, for ten minutes only once in about nineteen years.)

As a fairly good approximation for roof pitches up to 50°, the actual area of the roof surface may be taken as the basis for calculation, ignoring the pitch and the angle at which the rain comes down; this gives the flow load as $\frac{2 \cdot 6}{100} \times$ actual roof area in square feet (gallons per minute).*

Flow capacity of gutters

The flow *capacity* of a simple straight gutter, i.e. the amount of water in gallons per minute that it can carry, depends on its area of cross-

* For pitches of more than 50°, a more accurate formula must be used: i.e. Flow load = Plan area × (0.026 + 0.012 tan A), where A is the angle of pitch.

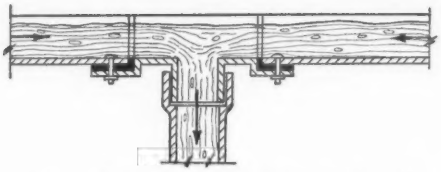


FIG. 1 Flow to middle: sharp-cornered outlet

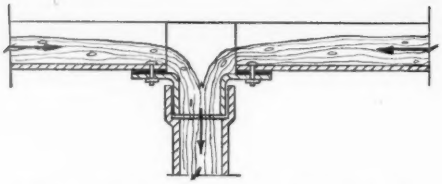


FIG. 2 Flow to middle: round-cornered outlet

section, its shape, length and slope. If the gutter is level, then only area and shape affect its capacity. Quite a slight slope markedly increases the capacity though there is a limit to the advantage that can be achieved. An indication of the effect of slope is given by the following figures for a 36 ft length of 4½ in. half-round gutter laid to various falls:

Level	15 gallons per minute
1″ in 54 ft	22 gallons per minute
1″ in 27 ft	26 gallons per minute
1″ in 18 ft	26 gallons per minute

Too big a fall is to be avoided; apart from appearances, too wide a gap between roof edge and gutter may cause some water to miss the gutter altogether.

Length has little influence on the flow capacity especially of level gutters. The effect is somewhat more significant with short sloping gutters; thus a 20 ft sloping gutter has 8% less capacity than a similar gutter 50 ft long. Length, however, obviously determines the area of roof drained and therefore the flow load.

Effect of bends

A right-angle bend reduces flow capacity if it is near an outlet. As a general rule, for level gutters if the bend is within 6 ft of an outlet a 20% reduction in capacity should be assumed for a sharp-cornered bend, but only a 10% reduction if the bend has a corner rounded to a 1 in. radius; for sloping gutters the reduction should be taken as 25% for both rounded and sharp corners. If the bend is within 6–12 ft of the outlet half these reductions may be assumed.

Effect of outlets and downpipes

The shape, size and position of the outlet and downpipe all affect the flow capacity of a gutter.

Round-cornered outlets give a smoother flow (Figs. 1 and 2) than sharp-cornered ones and this has a marked effect on gutter capacity with the smaller outlet sizes.

The area of cross-section of outlet and downpipes may be smaller than that of the gutter because a gutter rarely flows full at the outlet and the speed of flow increases markedly at this point. The survey showed that the downpipe sizes commonly used are unnecessarily large, and smaller sizes may be used without affecting the capacity of the gutter. If smaller downpipes are used they will tend to run full under conditions of heaviest rainfall and joints should be sealed to avoid leakage. Swan-necked offsets and bends and shoes at the bottom of the downpipe do not significantly affect the capacity of the gutter.

The position of the outlet has a big effect on the flow capacity of a gutter but, in deciding at what point in the length of a gutter the outlet should be placed, the ease of connection to the underground drainage system and the appearance have also to be considered.

When an outlet is placed centrally in the length of a gutter, the gutter capacity required will be one-half of that needed for an end outlet. Generally if the outlet is not at the end the gutter capacity required will be a fraction L_1/L of the total flow load where L_1 is the length of the longer arm of a gutter of total length L.

Design data

The tables that follow give the calculated flow capacities of various sizes and shapes of straight level gutters with an outlet at one end. The figures are calculated from a formula* based on the experimental results and apply strictly only to the gutters specified. For other shapes of gutters approximating to the half-

* Q (flow capacity) = 1.15 $A^{\frac{3}{4}}$ where A = area of cross-section.

round or ogee type the flow capacity may be calculated from the formula.

After allowing for the position of the outlet as above, allowances for other factors that affect the flow should be made as follows:

(1) *Slope:* for slopes of 1 in. in 50 ft or greater the capacities may be increased by 40%

(2) *Bends*

(i) Within 6 ft of outlet:

Level gutters:

sharp-cornered bend, 20% reduction;

round-cornered bend, 10% reduction.

Sloping gutters: 25% reduction.

(ii) Within 6–12 ft of outlet, half the above reductions.

(3) *Length:* for sloping gutters up to 20 ft long, 10% reduction.

Details of appropriate downpipe sizes which do not restrict flow are given in Table 2.

The roof edge

The manner in which the water leaves the edge of a roof varies with the kind of roof covering used, and this bears on the fixing of gutters. For some roofs, e.g. a slate roof, the water leaves the edge with very little spread to front or rear. The obvious position of the gutter is then centrally under the edge and it is possible for the gutter to collect all the water even when it is fixed some distance below the roof edge; this is useful for a long sloping gutter, but in any case the distance should not be more than 2 in. On the other hand, for some roofs, e.g. clay pantiles (with sharp upper corner to the edge), the water leaves the edge with a wide spread, and the gutter must be close to the edge with its centre slightly forward of the under edge of the roof. When the lower corner of the roof edge is rounded, the water may be deflected more to the rear, and the centre of the gutter should then also be placed slightly to the rear. The most satisfactory roof edge is one with the upper corner round and the lower corner sharp.

Installation and maintenance

Continued good performance depends on good installation and regular maintenance. Needs will depend on locality. Below trees, gutters should be cleared at least once a year after the leaves have fallen; wire balloons can assist in preventing downpipe blockage. Near some power stations, monthly inspection may be desirable owing to fuel-ash deposits.

Sagging because of careless installation or subsequent disturbance by ladders, causes back-falls, which affect drainage performance, and ponding which can affect durability. Unsuitable choice or fixing of gutter clips can lead to sideways tilt and thereby reduce gutter capacity. The use of sloping gutters not only increases the capacity but also helps to prevent back-falls and ponding.

Example

To calculate size of gutters and downpipes required to drain roof 160 ft long × 36 ft broad (distance from ridge to eaves) with 30° pitch.

Area of roof = 36 × 160 = 5760 sq. ft.

Since pitch of roof is less than 50°, rainfall load = $\frac{2 \cdot 6}{100} \times 5760 = 150$ gal/minute.

From Table 1, a level 6 in. true half round gutter with outlet at one end can accommodate a flow of 31 gal/minute or, if gutter has a slope not less than 1 in. in 50 ft to the outlet, the flow capacity is $31 + 31 \times \frac{40}{100}$, i.e. 43.4 gal/minute. By providing an outlet at the centre the flow capacity is increased to 86.8 gal/minute. This would cater for half the roof, hence if this system were duplicated then adequate drainage of the whole roof would be attained, i.e. 6 in. true half-round gutters sloping to outlets 40 ft from each end.

Table 2 shows that 4 in. downpipes are required, preferably with round-cornered outlets.

Valley gutters

Although the information given in this Digest relates to roofs drained by eaves gutters, much of it is applicable to valley gutters.

Thus the method of calculating the quantity of water falling on the roof remains the same except that the area of the double roof must be taken into account and no correction for pitches steeper than 50° is needed. The formula relating quantity of water to area of gutter has not been verified experimentally for larger gutters, but it should give guidance on the appropriate

cross-sectional area of larger half-round gutters. For gutters of rectangular or trapezoidal section the ratio of depth to width affects the capacity, but the formula will give guidance where the ratio of gutter width to gutter depth is about two to one.

TABLE 1

Flow capacities (in gallons per minute) for level gutters with outlet at one end

(*a*) *Half-round gutters*

Gutter size (inches)	True half-round gutters[1]	Nominal half-round gutters[2]
3	5·6	4·2
4	11	8·8
4½	15	11
5	20	14
6	31	24

(*b*) *Ogee gutters*

Gutter size (inches)	Asbestos-cement gutters to B.S. 569: 1956	Metal gutters	
		Aluminium or cast iron[2]	Pressed steel[1]
4	14	6·5	12
4½	20	6·8	18
5	24	11	23
6	38	Not Standard	35

(1) Pressed steel to B.S. 1091: 1946. Asbestos cement to B.S. 569: 1956
(2) Aluminium to B.S. 1430: 1947. Cast iron to B.S. 1205: 1948

TABLE 2

Recommended downpipe sizes (diameter in inches) for level and sloping gutters

Half-round gutter size (inches)	Sharp (S.C.) or round-cornered (R.C.) outlet	Outlet at one end of gutter	Outlet not at one end of gutter
3	S.C.	2	2
	R.C.	2	2
4	S.C.	2½	2½
	R.C.	2	2
4½	S.C.	2½	3
	R.C.	2	2½
5	S.C.	3	3½
	R.C.	2½	3
6*	S.C.	3½	4
	R.C.	3	4

* These values are provisional

(Prepared at the Building Research Station, Garston, Herts.)

© *Crown copyright 1958*
Printed in Great Britain by Unwin Brothers Limited
and published by
HER MAJESTY'S STATIONERY OFFICE:
Single copies 3d. each
(Annual Subscription 5s., including postage)

5437B Wt. 32 Ps. 300707 K332 11/58 Gp. 1343 S.O. Code No. 72-22-1-16

